HUNTINGDONSHIRE FAUNA & FLORA SOCIETY

26th ANNUAL REPORT for 1973

Price (to non-members) 50p

Published March 1974

HUNTINGDONSHIRE FAUNA AND FLORA SOCIETY

OFFICERS AND COMMITTEE

President:

Professor A.N. Worden, Huntingdon Research Centre, Huntingdon
(Tel: Woolley 431)

Chairman:

Mr. H.F. Tebbs, 46 Grange Avenue, Dogsthorpe, Peterborough
(Tel: Peterborough 66558)

Hon. Secretary and Report Editor:

J.H. Cole, Huntingdon Research Centre, Huntingdon
(Tel: Woolley 431)

D.A. Davies, 48 Desborough Road, Hartford, Huntingdon
(Tel: Huntingdon 53171)

Ordinary Members:

Mr. G.E.D. Alcock	Dr. M.G. Morris
Mr. J.E.H. Blackie	Mr. T.E. Patston
Mrs. M. Buchanan	Mr. T.C.E. Wells
Mr. E.T. Lees	Mrs. H. While

Recorders:

Mammals	Professor A.N. Worden, Huntingdon Research Centre, Huntingdon.	
Birds	Mr. E.T. Lees, 14, Eaton Close, Hartford, Huntingdon.	
Fungi & Lichens	Mr. J.L. Gilbert, The Herbarium, Royal Botanic Gardens, Kew, Richmond, Surrey.	
Flowering Plants	Mr. T.C.E. Wells,	Monks Wood Experimental Station Abbots Ripton, Huntingdon.
Bryophytes	Miss S. Marshall,	
Coleoptera	Dr. R.C. Welch,	
Hemiptera (Heteroptera and Homoptera – Auchenorhyncha)	Dr. M.G. Morris,	
Odonata	Dr. N.W. Moore,	
Lepidoptera	Mr. J. Heath,	
Diptera	Dr. B.N.K. Davis,	
	Mr. J.H. Cole, Huntingdon Research Centre, Huntingdon.	

CONTENTS

*Reproduced from the 1973 Hinchingbrooke Natural History Society Report by courtesy of Mr. J.S. Clark.

ANNUAL REPORT FOR 1973

NO. 26

Secretary's Report

The 1973 Annual General Meeting was held at 7.30.p.m. on Saturday 24th March; at Huntingdon Research Centre, Alconbury. Mr. H.F. Tebbs took the chair and 35 members were present. Minutes of the previous A.G.M. held on 25th March 1972 were accepted without comment.

The Secretary's report contained in the Annual Report No.25 and the Treasurer's report and balance sheet were accepted.

The election of Officers and Ordinary Members of the Committee was dealt with as listed in the present report.

After the business meeting Dr. Bernard Nau gave a talk illustrated with colour slides on "A bird ringing expedition to Spain and Portugal".

Meetings

The following four ordinary meetings were held during the year:

10th January	"Nature through the lens" by Mr. J. Robinson, Warden of Castor Hanglands National Nature Reserve. At Monks Wood Experimental Station.
14th February	"Bird conservation in Australia" by Dr. N.W. Moore, Head of the Toxic Chemicals and Wildlife Section of Monks Wood Experimental Station. At Monks Wood Experimental Station.
24th October	"The Natural history of bats" by Mr. R.E. Stebbings, of Monks Wood Experimental Station. At Monks Wood Experimental Station.
20th November	"A visit to Nigeria" by Mrs. Mary Buchanan at Huntingdon Research Centre.

The following eight field meetings were held:

5th May	Archers Wood, Coppingford – by kind permission of Mr. R.A. Fitton. Leader Mr. T.C.E. Wells.
20th May	Lammas Meadow, St. Neots Common. Leader Mrs. H. While who kindly invited members back for tea at "Bankside".
2nd June	Castor Hanglands National Nature Reserve. Leader Mr. J. Robinson, the Reserve Warden.
17th June	Ramsey Heights Clay Pits. Leader Mrs. Sheila Wells.
30th June	Lady's Wood, Upwood. Late evening meeting for moths, Mr. J. Heath operated his mercury vapour lamp.
22nd July	Railway track between Nassington & Sibson Tunnel. Leader Mr. H Benson.
26th August	Disused railway track west of Bluntisham Station site, by kind permission of Messrs. J. Stokes & C. Rose. Leader Dr. B.N.K. Davis.
22nd September	Fungus Foray at Holme Fen National Nature Reserve. Leaders Mr. S. Carter and Mrs. S. Wells.

This Annual Report is a little shorter than the last, but the steady increase from the 18 pages of 1966 could not be maintained indefinitely.

I am pleased to include full reports on amphibians, reptiles and mammals from the Hinchingbrooke Natural History Society Report for 1973 compiled from the observations of over 60 students and teachers of Hinchingbrooke School. We have missed the reports on the first two groups since Mr. Henry Berman had to curtail his activities through ill health.

Also included is a complete list of members of the Society which I intend to update each year in future.

Jonathan Cole

BOTANICAL NOTES

T.C.E. Wells

Monks Wood Experimental Station

Work on the Flora of Huntingdonshire has proceeded steadily, more than 5,000 records having been made during this season. There are now few tetrads (2Km. squares) which have not been visited once, albeit some of them for only a short time. Nevertheless, it is becoming increasingly clear that if an average of at least 200 species per tetrad is to be achieved, it is necessary to visit each tetrad at least three times, a task which will not be made easier by the petrol crisis!

It is a pleasure to acknowledge the help given by members of the Society who have sent in records, the more interesting of which are included in the list which follows.

Records are given in the same form as in previous reports, the 4 and 6 figure grid reference accompanying each record, the 100 Km. square 52 (TL) being omitted.

The following initials are used for recorders:

Mr. H. Benson (H.B.), Mr. J.E.H. Blackie (J.E.H.B.), Dr. B.N.K. Davis (B.N.K.D.), Miss P. Goodliff (P.G.), Mr. A. Primavesi (A.P.), Mr. M. Ward (M.W.), Mrs. S.E. Wells (S.E.W.), Mr. T.C.E. Wells (T.C.E.W.).

Equisetum telmateia Ehrh. Great Horsetail. Many plants in a wet, roadside ditch, Elton 105941, July 22nd (S.E.W.).

Phyllitis scolopendrium (L.) Newm. Hart's–tongue Fern. In Birch woodland, Holme Fen N.N.R. 2088, August (P. Burnham); Alconbury 1876, July (J.E.H.B.).

Ophioglossum vulgatum ssp. vulgatum L. Adder's Tongue. Grassy ride, Perry Wood, 142666, April 28th (T.C.E.W.); wet rides, Sand Wood, 232538, May 12th (T.C.E.W.); roadside verge, Woodfield Farm, Little Gidding, 145831, June 3rd (H.B.). Further records of a species which was once considered to be rare in the county.

Caltha palustris L. Kingcup. In a wet, Glyceria swamp, Hartford. 253723, June 4th (T.C.E.W.). More localised records of this species would be welcome.

Eranthis hyemalis (L.) Salisb. Winter Aconite. Naturalised in a field next to Stibbington Hall. 090987, February 11th (H.B.).

Ranunculus auricomus L. Goldilocks. Roadside verge 139712 and meadow 136719 at Easton. May 11th (B.N.K.D.).

Ranunculus trichophyllus Chaix ssp. trichophyllus. Water Crowfoot. Abundant in dyke, north of Elton Stanch. 085953, June 9th (T.C.E.W.).

Ranunculus aquatilis L. Water Crowfoot. Frequent in ditch, St. Neots Common. 183616, April 22nd (T.C.E.W.); clay pits, Ramset Heights 243848, June 17th (S.E.W.).

Ranunculus peltatus Schrank. ssp. peltatus. Water Crowfoot. Abundant in clay–bottomed drain near River Nene, Elton. 085953, June 9th (T.C.E.W.).

Erophila verna (L.) Chevall. Whitlow Grass. Gravel path, Easton Lodge, 133696, May 10th (B.N.K.D.); disused railway track, Somersham 362771, April 29th (T.C.E.W).

Cardamine flexuosa With. Wood Bitter--cress. Wet, shaded place in Conington churchyard, 180859, June 1st (H.B.). The third record for the county.

Rorippa microphylla x nasturtium–aquaticum (R. x sterilis Airy–Shaw). Wet ditch by railway crossing, Offord Cluny 218669, September 8th (T.C.E.W.). Apparently the 1st record of this hybrid in the county. Recognised by dwarf mis–shapen fruits which contain few good seeds.

Erysimum cheiranthoides L. Treacle Mustard. Weed in onion–field, nr. Bevill's Leam, 258919, August 15th (A.P.).

Arabidopsis thaliana (L.) Heynh. Thale Cress. Railway embankment, Somersham 355766, April 29th; disused railway line, Covington, 086716, May 6th (T.C.E.W.).

Descurania sophia (L.) Webb ex Prantl. Flixweed. Onion–field, nr. Bevill's Leam, 258919, August 15th (A.P.). A frequent weed in the "Fens".

Hypericum humifusum L. Trailing St. John's Wort. In a plantation, Orton Gate, 155930, July 26th (H.B.). Only the fourth recent record.

Saponaria officinalis L. Soapwort. Established garden escape in Haddon village. 135926, August 18th (A.P.).

Stellaria alsine Grimm Bog Stitchwort. Among wet flushes in grassland on Greensand escarpment, Tetworth 219532, May 12th (T.C.E.W.). This is only the second time that I have seen this species in the county.

Malva moschata L. Musk Mallow. Waste land on Staughton airfield, 127618, July 5th (S.E.W.). Both white and pink coloured forms.

Geranium pusillum L. Small–flowered Cranesbill. Edge of field, Toseland 231619 June 3rd (T.C.E.W.); Brampton, 2072 (P.G.).

Erodium cicaturium (L.) L'Herit. Common Storksbill. Railway cutting, nr. Wansford Tunnel, 182974, May 3rd (H.B.).

Impatiens capensis Meerbrugh Orange Balsam. Banks of River Nene, Elton Stanch, 0895, August 28th (H.B.).

Impatiens glandulifera Royle. Policeman's Helmet. Banks of River Kym, Great Staughton, 1264 (M.W.).

Frangula alnus Mill. Alder Buckthorn. Several bushes, Short Drove, Holme Fen, N.N.R. 206889, October 25th, J.M. Schofield. First recorded there in 1846.

Trifolium medium L. Zigzag Clover. Large patch on railway embankment, Great Stukeley Lodge, 2375, July 26th (B.N.K.D.).

Trifolium ochroleuchon Huds. Sulphur Clover. Calcareous grassland, Staughton airfield, 125616, July 5th (T.C.E.W.).

Astragalus glycophyllos L. Milk–vetch. Several clumps on roadside verge, S.E. of Hunts Close Grove, 064724, May 6th (T.C.E.W.).

Coronilla varia L. Crown Vetch. Well–established in grassland on railway embankment, Old Fletton, 192967, August 3rd (T.C.E.W.). The 3rd localised record for the county.

Filipendula vulgaris Moench Dropwort. Grassland on Greensand. Tetworth, 219532 May 12th (T.C.E.W.).

Potentilla anglica Laicharding Trailing Tormentil. Plantation at Orton Gate, 155930, July 27th (H.B.). The first record since 1956.

Crataegus oxyacanthoides Thuill Midland Hawthorn. Frequent in Archer's Wood, 173813, May 5th (T.C.E.W.).

Sorbus torminalis (L.) Crantz Wild Service Tree. About 40 trees, many reproducing by suckers. Archer's Wood, 176810, May 5th (T.C.E.W.).

Pyrus communis L. Pear. One tree in hedgerow, Great Gidding, 117823, May 28th (S.E.W.).

Saxifraga tridactylites L. Rue–leaved Saxifrage. Old brick wall, Gaynes Hall, Dillington, 149662, April 28th; roof of old cottage, Hartford 2472, June 4th (T.C.E.W.).

Conopodium majus (Gouan) Loret Pignut. Grassland on Lower Greensand ridge, Tetworth, 218533; grassy ride, Sand Wood, 232537, May 12th (T.C.E.W.).

Oenanthe aquatica (L.) Poir. Fine–leaved Water Dropwort. Fen dyke, Ramsey Heights, 243848, June 27th (S.E.W.).

Mercurialis annua L. Annual Mercury. Crack in brickwork, Buckworth Church, 148768, July 7th (S.E.W.).

Primula veris x vulgaris Huds. False oxlip. Railway cutting near Wansford Tunnel 182974, May 3rd (H.B.).

Symphytum x uplandicum Nyman Blue comfrey. Roadside verge at Chesterton, 1294, August 14th (A.P.).

Lithospermum officinale L. Gromwell. Roadside verge, south–east of Hunt's Close Gorse, 064724, May 6th (T.C.E.W.); Bridle track between Grove Lodge and Hamerton Grove Wood, 118793, April 27th (T.C.E.W.).

Cuscuta epithymum (L.) L. Common Dodder. Railway cutting at Great Stukeley Lodge, 2375, July 26th. Three patches, parasitic on Lotus and Trifolium medium (B.N.K.D.). The first record since 1898.

Veronica filiformis Sm Lawn at Alconbury. 1876 (J.E.H.B.). A species which appears to be spreading.

Odontites verna (Bell.) Dum. Red Bartsia. Alconbury 1874 (J.E.H.B.). A white flowered form.

Betonica officinalis L. Betony. Woodland ride, Perry Wood, 142666, April 28th (T.C.E.W.).

Galeobdolon luteum Huds. Yellow Archangel. Great Staughton, 1264 (M.W.); under Hazel coppice, Archer's Wood, 174809, May 5th (Mrs. Buchanan).

Lamium amplexicaule L. Henbit. Edge of barley field, Elton, 085947, June 9th (S.E.W.).

Lamium hybridum Vill. Cut–leaved Dead–nettle. Edge of barley field, Elton, 085947, June 9th (S.E.W.).

Legousia hybrida (L.) Delarb. Venus's looking–glass. Several plants at edge of trackway, Elton 086956, June 9th (S.E.W.). A welcome record of an arable weed which is now rare in the county.

Dipsacus pilosus L. Small Teasal. Edge of ride, Archer's Wood, 174809, May 5th (T.C.E.W.).

Petasites hybridus (L.) Gaertn. Butterbur. Locally abundant in willow holt, St. Neots Common 182610, April 22nd; damp streamside, Great Gransden 264558, September 1st (T.C.E.W.). Additional records of a species recorded previously only from Keyston, in recent times.

Artemesia absinthium L. Wormwood. A large patch on roadside verge, opposite Dawson's Farm Drove, Ramsey Hollow, 344869, August 31st (T.C.E.W.).

Cirsium eriophorum (L.) Scop. ssp. britannicum Petrak. Woolley Thistle. More than 30 plants on railway cutting, Great Stukeley Lodge 2375, July 26th (B.N.K.D.).

Lactuca virosa L. Prickly Lettuce. Alconbury 1874 (J.E.H.B.).

Groenlandia densa (L.) Fourr. Opposite–leaved Pondweed. Abundant in water–filled dyke by River Nene, Elton Stanch, 085953, June 9th (T.C.E.W.). Supposedly common, but one of the pondweeds which I rarely find.

Paris quadrifolia L. Herb Paris. About 10 plants under dense Hazel coppice, Weaveley Wood, 226539, May 12th (T.C.E.W.).

Juncus tenuis Willd. Frequent in marsh at edge of old brick pits, Hamerton, 135802, May 28th. Third county record of a species which was first found at St. Neots Common in 1967 (T.C.E.W.).

Iris foetidissima L. Stinking Iris. Under coppiced Elm, Ash Wood 141663, April 28th; abundant at edge of ride, Archer's Wood 177809, May 5th (T.C.E.W.).

Listera ovata (L.) R.Br. Twayblade. Found in good quantity in the following woods during 1973: Hamerton Grove Wood 121797; Perry Wood 142666; Archer's Wood 176810; Weaveley Wood 225543; Sand Wood 231538; (T.C.E.W.) and on a road side verge near Woodsfield Farm, Little Gidding 145831, June 3rd (H.B.).

Platanthera chlorantha (Cust.) Rchb. Greater Butterfly Orchid. In small quantity in Archer's Wood 173812 May 5th; Sand Wood 231538 May 12th; and Ash Wood, Dillington 140664, April 28th (T.C.E.W.).

Ophrys apifera Huds. Bee Orchid. Calcareous grassland, Great Staughton airfield, 113611 and 125616, July 5th (S.E.W.).

Orchis morio L. Green–winged Orchid. 1 flower spike, meadow grassland, near Haddon 112928, May 27th (H.B.).

Orchis mascula (L.) L. Early Purple Orchid. Found in the following woods in 1973: Archer's Wood 173812; Hunt's Close Gorse 060728; Weaveley Wood 225543; Perry Wood 143667; Sand Wood 231538, including 1 pure white inflorescence in Sand Wood (T.C.E.W. and S.E.W.).

Dactylorchis fuchsii (Druce) Vermeul. Common Spotted Orchid. Damp grassland, Staughton Moor 128617, July 5th; grassy ride, Perry Wood 142666, April 28th; rides, Sand Wood 232538, May 12th (T.C.E.W.); roadside verge, Little Gidding 145831, June 3rd (H.B.).

Carex acuta L. Tufted Sedge. Abundant in wet dyke, Hartford 252723, June 4th; edge of dyke, near River Nene, Sibson 074968, July 22nd; in Stanground Lodge, Fletton 196952, August 3rd (T.C.E.W.).

Carex spicata Huds. Spiked Sedge. All records from damp grassland, mostly roadside verges Great Gidding 118826; Woodhurst 3074; Hamerton 130790; Hamerton 135802; Buckworth 141777 (T.C.E.W.). Specimens in Herb. M.W.

Carex remota L. Remote Sedge. Edge of Lake, Tetworth, 217533, May 12th (T.C.E.W.).

Glyceria plicata Fr. Wet ditch, Chesterton, 125937, August 15th (A.P.).

Festuca longifolia Thuill. Edge of railway track, Sibson 074967, July 22nd (T.C.E.W.). Apparently the first record for the county.

Bromus thominii Hard. Grassy track, Elton 084959, June 9th (T.C.E.W.).

Bromus lepidus Holmberg. Roadside verge, Toseland, 2462, June 3rd (S.E.W.).

Bromus commutatus Schrad. Meadow Brome. Roadside verge, Buckworth 152783, July 7th; rough grassland, Woodhurst, 3074, June 21st (S.E.W.).

Hordeum jubatum L. Roadside verges on A1 from Alconbury to Chesterton, 132954, August 14th (A.P.). 3rd county record. Conspicuous on A1 as far north as Grantham, occurring as a weed grass in verge mixtures.

Helictotrichon pubescens (Huds.) Pilger Hairy Oat. Disused railway line, Sibson 079970, June 9th (H.B.).

Holcus mollis L. Creeping Soft–grass. In hedgerow near Elton Furze, 121936, August 16th (A.P.). Rarely recorded in the county.

CALYSTEGIA x LUCANA (TENORE) G. DON, IN HUNTINGDONSHIRE

T.C.E. Wells

Monks Wood Experimental Station

Until 1959, the plant commonly known as the Larger Bindweed or Bellbine was regarded as consisting of two species, Calystegia sepium (L.) R.Br. and C. silvatica (Kit.) Griseb. These two taxa were separated largely on the basis of size and degree of inflation of the bracteoles, C. silvatica being the larger and more robust plant, with triangular shaped bracteoles which were inflated at the base. Tutin (1959) relegated C. silvatica to C. sepium subsp. silvatica and this nomenclature was maintained in the second edition of the Flora of the British Isles, although more recently, Tutin et al (1972) have reverted to the previous usage.

It is fairly obvious from the nomenclatural changes that have been made in the past that the limits of each species are not easily defined. It has been the common experience of field botanists for many years that plants which are intermediate in characters between the two species are occasionally encountered. Stace (1961) made a noteworthy contribution to the study of Calystegia when he developed a numerical method which enabled the two species, C. sepium and C. silvatica to be separated from each other and also from the hybrid between them, which he called C. x lucana. Details of the method are given in Stace (1961), but briefly they entail making four measurements; (i) corolla length (ii) bracteole width (iii) bracteole inflation (iv) bracteole mid–rib conspicuousness. These measurements are then scaled and added together, and provide a final figure which can be used as a character index for any population. The index has a range of 8 – 11 for C. sepium, 14 – 21 for C. x lucana and 23 – 31 for C. silvatica.

During 1972 and 1973, populations of Calystegia were sampled in an attempt to find out how common the hybrid, C. x lucana was in the county. A sample of 6 flowers was taken from each colony or population and measured using Stace's method. No attempt was made to sample the whole county, only those colonies encountered during botanical recording work being sampled. Nevertheless, since recording work was not concentrated in any one district during 1972 and 1973, the results of the survey probably give a fairly accurate account of the distribution and frequency of the hybrid in the county.

Results

Calystegia sepium is the most widespread and commonest species in Huntingdonshire, occurring in hedgerows, ditches, around buildings, and is especially frequent along dyke edges in the Fens. C. silvatica tends to be more local and is mostly found in built–up areas or along railway fence lines.

The hybrid, C. x lucana was found at the following 11 sites:–

(i) Easthill Farm, Great Staughton, 52/131629
(ii) Hedge around Huntingdon Cricket Club, Huntingdon 52/235726
(iii) Lay–by near "Bankside", Great Paxton, 52/215653
(iv) Hedgerow, Wyton cross–roads, Wyton 52/272746
(v) Upwood churchyard 52/259827.
(vi) Car park behind Tesco's stores, Ramsey 52/287850
(vii) Hedgerow, Hamerton village 52/136797
(viii) Lay–by, on A1, Sawtry 52/171850.
(ix) Roadside at Stilton 52/161901
(x) Straight Drove, Farcet 52/246918
(xi) Hedgerow, Molesworth 52/071758

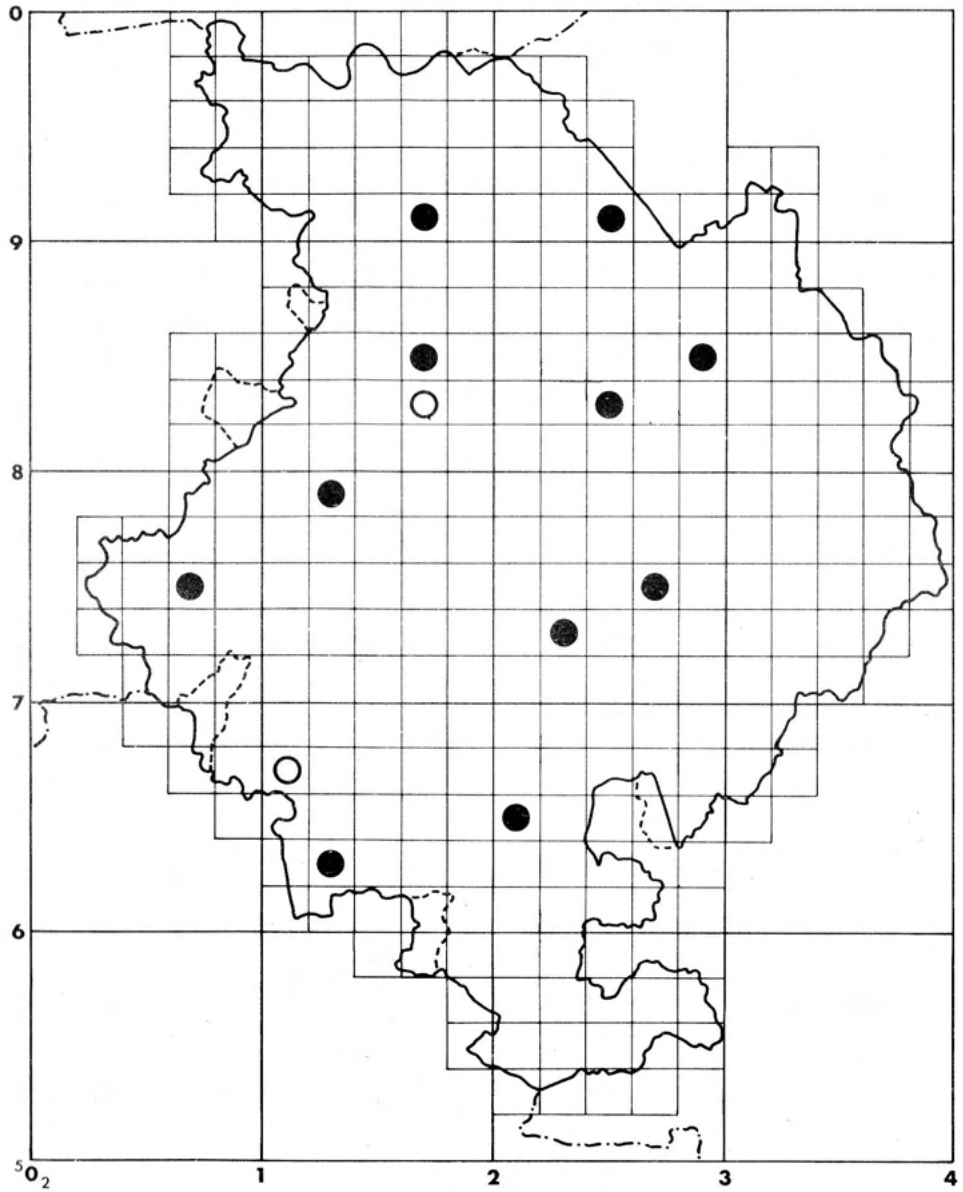
The first record of C. x lucana for Huntingdonshire appears to be by J. Gilbert on 21st August 1957 from 'near a stream, Sawtry village', with a second record on 3rd August 1958 from a 'roadside near Claylands Farm, Great Staughton'. Both records were confirmed by Dr. S.M. Walters, who in 1958 had published (with A. Martin) the first record of this species for Cambridgeshire. However, although this was the first published British record, Stace (1959) found in a search of herbarium material at Kew, that a specimen from Surrey, collected in 1901 appeared to be the first British record.

Map 1 shows the distribution of all records from Huntingdonshire. It is clear that C. x lucana is scattered in the county, and as it has been shown by Stace (1961) that back–crosses with both parents are fertile, it is likely that further records of this hybrid will be forthcoming. It would also welcome records and specimens of any Calystegia species with pink–coloured flowers or pink–striped flowers.

I am grateful to John Chandler for drawing my attention to Dr. Stace's paper, and for help with recording from my wife and Harry Benson.

Map 1

Records of Calystegia x lucana



● Records made : 1972 and 1973

○ Earlier records

REFERENCES

Stace, C.A. (1961) Some studies in Calystegia : Compatability and hybridisation in C. sepium and C. silvatica. Watsonia 5 (2), 88–105.

Tutin, T.G. (1959) Convolvulaceae, in Clapham, A.R. Tutin, T.G. and Warburg, E.F. Excursion Flora of the British Isles, Cambridge.

Tutin, T.G. Heywood, V.H. Burges, N.A. Moore, D.M. Valentine, D.M. Walters, S.M. and Webb, D.A. (1972) Flora Europaea, 2 Cambridge.

DUTCH ELM DISEASE IN HUNTINGDONSHIRE – THE THIRD YEAR

R. Colin Welch

Monks Wood Experimental Station

Details of my previous two surveys of Dutch Elm Disease in the County of Huntingdon and Peterborough carried out during August 1971 and 1972 have been published in the last two Annual Reports of this society (Welch 1972 and 1973).

Between 9th and 14th August 1973 Mr. R.A. Plant and Miss S.A. Marshall resurveyed the whole county using the same methods as had been employed during the previous two surveys. The results are shown in Table 1 below using the same three age and disease classes as were used in the 1972 survey:–

Disease Classes

1. Trees with single branches recently dead or dying
2. Trees with up to 50% of the crown recently dead or dying
3. Trees with more than 50% of the crown recently dead or dying

TABLE 1

Tree class	Disease class			Totals
	1	2	3	
Suckers	87	147	76	310
Young	38	45	86	169
Medium and mature	594	574	917	2085
				2564

It is perhaps of interest to compare these figures with those for 1972 (see Welch 1973, Table 2, p.19). Although the total number of diseased suckers and young elms has remained fairly constant the proportions in the different disease classes have changed quite markedly. Nearly half the diseased suckers are now placed in class 2 instead of class 1. Among the young elms the number in class 3 has doubled with a proportionate drop in class 1. It is when one examines the medium and mature trees that the effect of the disease is most striking. Numbers of trees in classes 1 and 2 have only slightly increased since last year but there are more than twice as many in class 3 this year. Since as many trees which were placed in class 2 during the 1972 survey were seen to be either dead or dying this year, it can be inferred that there has been a fairly even recruitment to all three disease classes during 1973.

The Forestry Commission again carried out a survey of Dutch Elm Disease in southern Britain in mid– August 1973, although the number of plots sampled was reduced to approximately one quarter of those surveyed in 1972. In addition woodland elms were largely ignored for the puposes of this survey which again included the Soke of Peterborough with their figures for Northamptonshire. The following data is taken from Table 3 in their report (Forestry Commission, 1973).

DUTCH ELM DISEASE IN HUNTINGDONSHIRE
TOTAL RECORDS AT AUGUST 1973

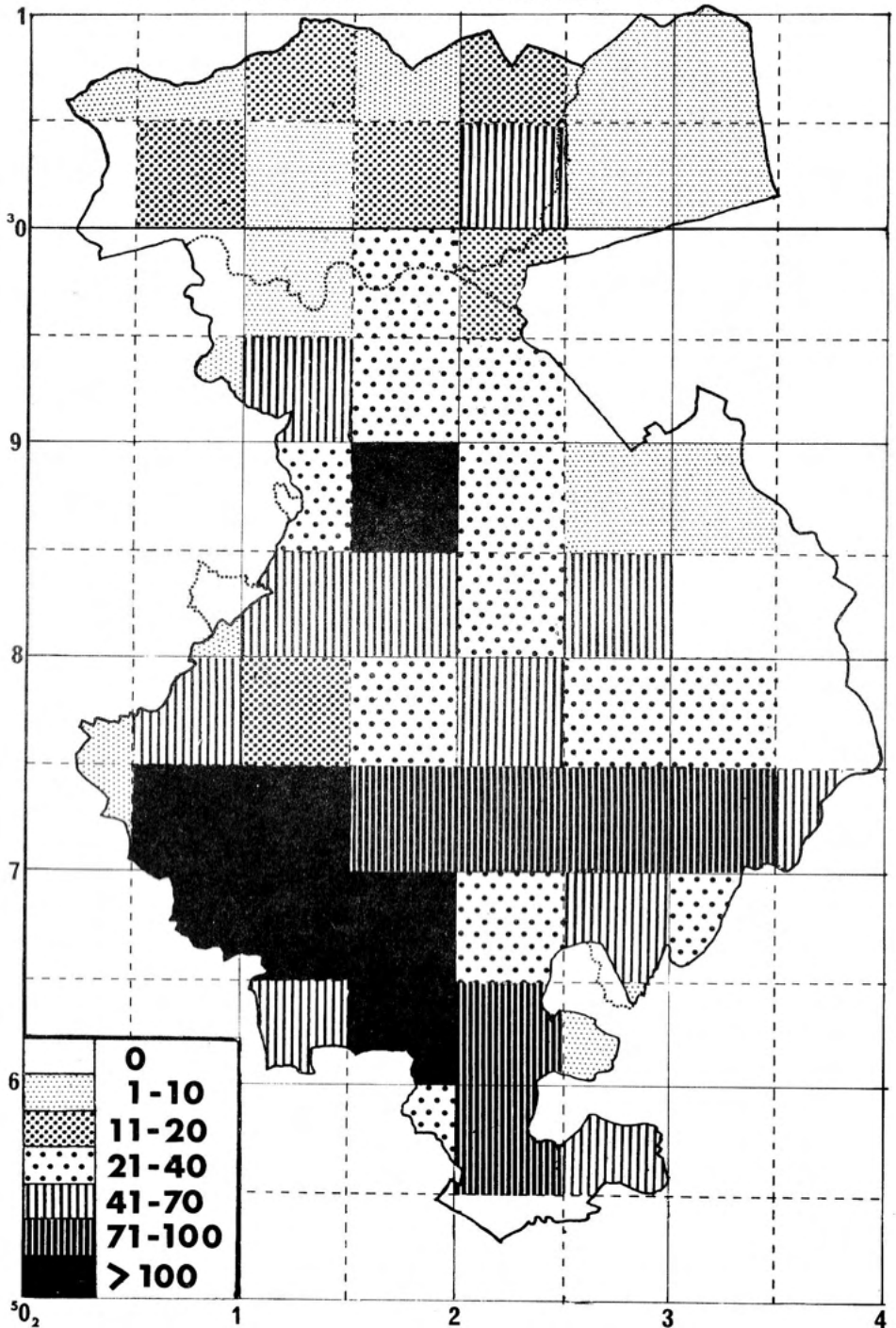


TABLE 2

Estimates of Non–Rural and Rural Elms in Huntingdonshire

Year	Total	Dying and recently dead	Long dead
1972	212,000	7,000	700
1973	207,000	8,000	None

Gibbs and Howell (1972, Table 11, pp 26–27) in summarising the 90% coverage of the county in the 1971 survey estimated the elms in their sample plots as being 63% Non–Rural, 37% Rural with no woodland elms recorded. However, when the county was completely surveyed in 1972 by the Forestry Commission, differences between the combined figures for Non–Rural and Rural elms and the figure for all records indicated that there were 80,000 woodland elms of which 2,000 were dying or recently dead.

The Forestry Commission estimated that nationally "the proportion of dead and dying trees has risen from 5.6% in 1971, and 10.9% in 1972 to 17.5% in 1973, with a further 3% of the original population felled over the last few years, mainly because of disease but also for road widening, housing development etc." They also state that "In some eastern counties (including Huntingdonshire) the disease increase has been less than in the rest of the country". This is of little comfort in a county where elms are such a dominant feature of our landscape, indeed Gibbs and Howell estimated that where present in their sample plots elm constituted 37% of the tree vegetation, a figure only equalled by Leicestershire.

The number of diseased trees shown in Table 1 above paints a gloomy enough picture but this is almost certainly an underestimate. Although the survey has been carried out during the same month each year it was noticeable that many trees did not develop disease symptoms until much later this year. As a result some trees will not have been noted whilst in others the severity of the disease increased so that trees recorded in class 2 ended up a month later in class 3.

REFERENCES

Forestry Commission, 1972. Second Dutch Elm Disease Survey. Information Note R11/6/C63, 3 tabs.

Forestry Commission, 1973. Dutch Elm Disease Survey Results 1973. DP. 21, 3 tabs.

Gibbs, J.N. & Howell, R.S. 1972. Dutch Elm Disease Survey 1971. Forestry Commission Forest Record, No. 82, 34 pp.

Welch, R.C. 1972. Dutch Elm Disease in Huntingdonshire. Rep. Huntingdon. Fauna Flora Soc., 24th, 9–11, 1 map.

Welch, R.C. 1973. Dutch Elm Disease in Huntingdonshire – A Resurvey. Rep. Huntingdon. Fauna Flora Soc., 25th, 18–21, 1 map.

A PRELIMINARY ACCOUNT OF THE BRYOPHYTE FLORA OF HUNTINGDONSHIRE

A.D. Horrill*

Introduction

Since I have left Huntingdonshire, and there are little published data, I feel it necessary to put on record a preliminary account of the bryophyte flora, although considerable scope for further work still exists in the region. This account is restricted to vice–county 31 and does not include the more northerly parts added when the administrative county of Huntingdon and Peterborough was created.

Recording work has been on the basis of 10 Km. squares or parts of squares and coverage varies in intensity from place to place. All records have been checked by me or members of the British Bryological Society and I have a small collection of voucher specimens for the area.

*Present address Merelwood Research Station, Grange–over–Sands, Lancashire.

Geology and Topography

Huntingdonshire is a small county of c.359 square miles extending approximately from Peterborough in the north to just south of St. Neots, a distance of about 30 miles, the greatest width of c.24 miles is nearly midway between these limits.

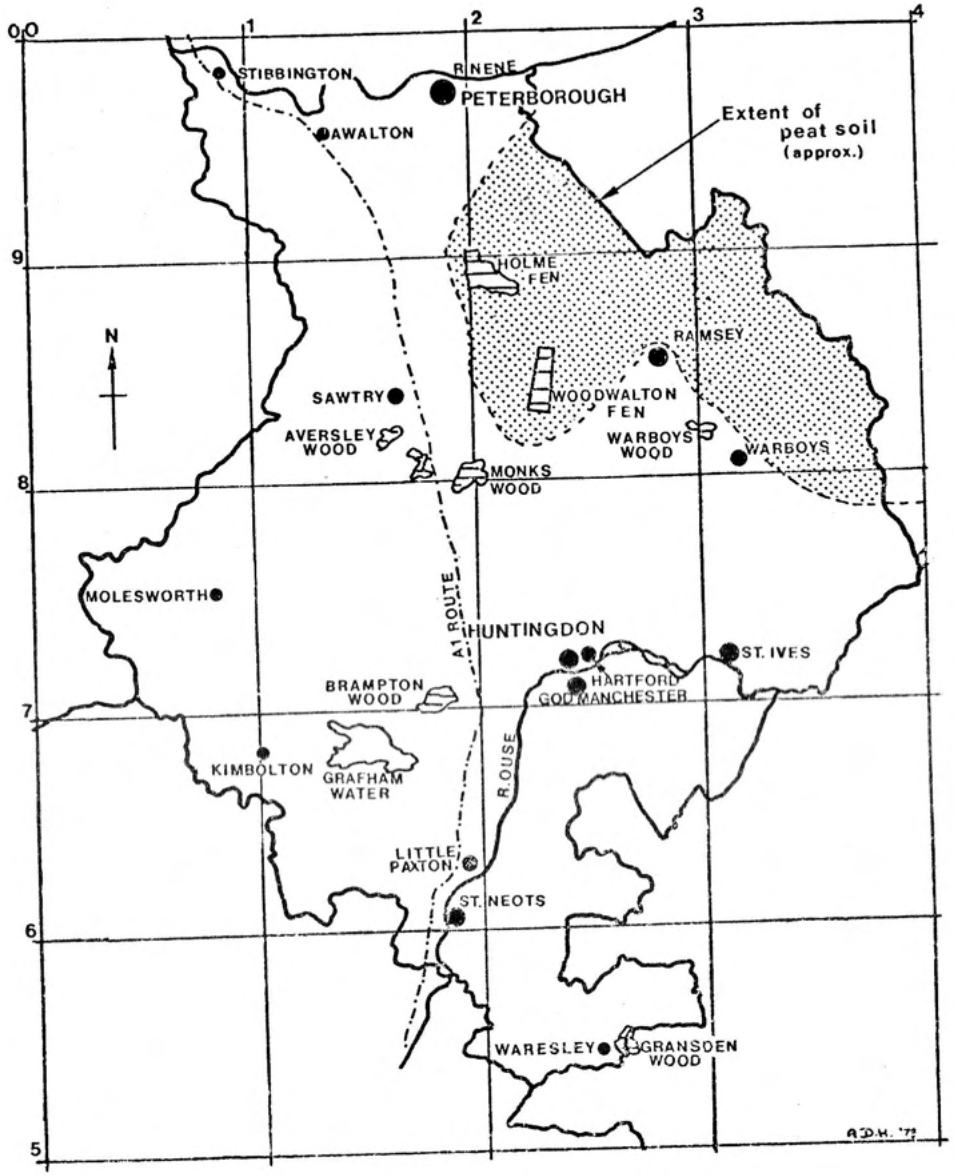
Topographically the area is relatively simple. The Fenland Basin occupies the north–east of the county with its associated peat deposits, most of this area is below the 50 ft. contour. Bounding this region and rising to a height of near 125 ft. is the relatively steep slope at the edge of the boulder clay deposits which cover the remainder of the county. These clays support the remains of a once extensive woodland area of oak and ash. The woodland areas survive because of the difficulty, in the past, of cultivating the steeper slopes on the heavy clay soils and for use as game reserves. The boulder clay area gives rise to a gently undulating countryside rising to a maximum height of c.200 ft., this region is cut in the south of the county by the valley of the Great Ouse River running from St. Neots, through Huntingdon, to St. Ives. Along the river valley deposits of sand and gravel are extensively worked to supply the building industry. The boulder clay can contain appreciable amounts of chalk fragments and where disturbance has taken place, as in road and railway cuttings, a calcareous substrate is present.

Rocky substrates are almost totally absent and only man–made habitats exist, these consist of walls, roof–tiles, bridges and pathways the composition of which may vary considerably. In several areas such as the village of Stibbington the local limestone from Northamptonshire and the Barnack area has been used providing a calcium rich rock habitat.

Climate

Huntingdonshire is situated in one of the climatically most continental areas of the British Isles. Records from the adjacent county of Cambridgeshire record a mean rainfall of 22.28 inches over a 30 year period, the mean for the years 1964 – 1972 at Monks Wood is 20.05 inches. (A. Miller pers. comm.) Summer temperatures in Cambridgeshire reached a mean July value of 61.7°F and a January mean of 39.3°F was recorded for the same 30 year period. Rainfall is greatest in the summer half of the year and total wet days (Ratcliffe, 1968) are below a mean of 120 days per year.

The only ameliorating factor in this rather dry area is woodland cover but as the primary management technique has been a coppice–with–standards system even these areas have been subject to periodic spells of desiccation.



Habitat changes and Pollution

The greatest habitat changes occurred in the latter part of the 18th Century with the progressive draining of the Fens when large areas of natural vegetation must have been destroyed and converted to arable land. This was particularly true around Whittlesey Mere. Since the period of drainage large scale agricultural activities have continued to the present day further reducing the natural habitats. On the credit side several new county records of ruderal species have been discovered in stubble fields and on disturbed ground.

Pollution is probably acting in two ways; eutrophication of the ground waters by agricultural fertilisers is detrimental to the growth of genera such as Sphagnum, whilst the growth of cities such as Peterborough will increase the load of airborne pollutants.

Historical

A considerable amount of work has been performed on the Quaternary flora of the fenland area and this combined with some discoveries of fossil mosses in the Ouse valley gravel pits have revealed a number of species extinct in the county. Amongst these may be mentioned Meesia longiseta Hedw., a species now unknown in the British Isles. The plant was discovered in peat deposits from Holme Fen N.N.R. by Dickson and Brown (1966), radio–carbon assays give an age of between 2240 and 1400 B.C. Entodon concinnus (De.Not.) has been discovered in clay deposits from the St. Ives gravel pits (Cambridge, 1968) the nearest known locality being on the Gog Magog Hills, Cambs. Godwin and Clifford (1939) record a number of fossil remains from bores taken in Huntingdonshire. A more extensive list follows and is taken from the recent (1973) publication by J.H. Dickson.

Acrocladium cuspidatum	Godmanchester
A. giganteum	Woodwalton Fen
A. sarmentosum	Hartford
A. stramineum	Woodwalton
A. trifarium	Woodwalton
Antitrichia curtipendula	Little Paxton
Aulacomnium palustre	Woodwalton and Trundle Mere
Anthoceros punctatus	Godmanchester
Camptothecium nitens	Woodwalton and Ramsey Fens
C. lutescens or sericeum	Little Paxton
Ceratodon pupureus	Godmanchester
Dicranella varia	Holme Fen
Dicranum scoparium	Trundle Mere
D. undulatum	Holme Fen

Drepanocladus lycopodioides	Trundle Mere
D. revolvens	Holme Fen
Eurhynchium praelongum	Godmanchester
E. striatum	Godmanchester
Hypnum cupressiforme	Trundle Mere
Meesia longiseta	Holme Fen
Mnium hornum	Woodwalton Fen
Neckera complanata	Little Paxton
Pleurozium schreberi	Holme Fen
Pohlia delicatula	Woodwalton Fen
P. nutans	Holme Fen
Polytrichum alpestre	Holme Fen
Rhytidiadelphus squarrosus	Little Paxton
R. triquetrus	Woodwalton Fen
Scorpidium scorpioides	Holme Fen
Sphagnum fuscum	Woodwalton Fen
S. magellanicum	Woodwalton Fen
S. recurvum	Woodwalton Fen
S. russowii	Woodwalton Fen
Thuidium tamariscinum	Woodwalton and Trundle Mere

Godwin and Clifford (1939) also list:–

Sphagnum cuspidatum
S. palustre

Records

The earliest mention traced for the bryophytes of the county is in Godwin and Clifford (1939) where the Marchioness of Huntley is recorded as having records and a collection was in existence at Orton Hall (J.L. Gilbert pers. comm.), however, several enquiries have failed to discover the fate or whereabouts of these records. The early records in the Census Catalogue are attributed to Dr. H.F. Parsons, as a member of the old Moss Exchange Club II. Records state his collection went to the Croydon Natural History Society, investigations revealed some lichens but no bryophytes. Occasional records have been made by other bryologists, the staff of the Nature Conservancy and more recently several new records have been added by visits of members of the Cambridge Botany School. A list of the main recorders is as follows:–

Mrs. Alderson, Hilary H. Birks (nee Lees), H.J. Birks, J.W. Bodger, A. Baxter, Berkeley, Callum, D.F. Chamberlain, J. Dransfield, B.T.F. Ducker, H.N. Dixon, J. Duckett, D.A. Davies, J. Dony, H. Edwards, Evans, J.L. Gilbert, Mrs. Garrood, J. Harrison–Smith, A.D. Horrill, M.O. Hill, G. Halliday, B. Ing, C. Jeffrey, C. Jermy, E.W. Jones, A.J. Kerr, T. Laflin, E.R.B. Little, T. Patston, P. Pitken, J.A. Paton, M.C.F. Proctor, P.G.M. Rhodes, F. Rose, P.W. Richards, F.A. Sowter, S.M. Walters, S.R.J. Woodell, T.D. Swinscow, A.R. Smith, Scrimshire, Sedgewick, C.C. Townsend, E.C. Wallace, H.L.K. Whitehouse.

Herbaria

There are few collections of Huntingdonshire bryophytes, the occasional specimens are scattered in odd Herbaria.

I hold a small collection of voucher material and there is a collection made by B.T.F. Ducker of species from Woodwalton Fen held by the Nature Conservancy at the Norwich office. A limited number of specimens of common species are present in the collection at Monks Wood Experimental Station.

Abbreviations in the text are as follows:

B.B.S.	Herbarium of the British Bryological Society
C.G.E.	Botany School, University of Cambridge
P.N.H.S.A.S.	Peterborough Natural History, Scientific and Archaeological Society now Peterborough Museum Society

If no indication is given I have a specimen in my own collection.

Arrangement of the Flora

The arrangement of the flora is based on the Census Catalogue of British Hepatics, 4th ed. 1965 (J.A. Paton), and Census Catalogue of British Mosses, 3rd ed. 1963 (E.F. Warburg).

The abundance and general habitat of the species is given followed by the first traced record with the collectors name underlined, the location of a voucher specimen is then given in brackets, if none is given then there is a specimen in my own herbarium. Records not refound since 1960 are placed in square brackets. c.c. –07 showed the species (mosses) present in the 1st edition of the Census Catalogue (1907) and c.c. –26 denotes that the species (mosses) was recorded in the 1926 edition, (Duncan, 1926). Finally the 10 Km. grid squares in which the species has been recorded to the end of 1969 are given, all are within the 100 Km. square 52 and this has been omitted e.g. for 17 the full four figure reference is 52/17.

ACKNOWLEDGEMENTS

I would like to thank all those who have sent me material and records particularly the members of the Huntingdonshire Fauna and Flora Society. I am grateful to the Curators of Herbaria for allowing me access to their collections and in particular to the Botany School Herbarium at Cambridge for the loan of reference specimens. I would like to thank Dr. H.L.K. Whitehouse for his help in several aspects of the writing of this account.

REFERENCES

BERKELEY, M.J. (1836) The English Flora. 5(2) p.204.

CAMBRIDGE, P. (1968) Fossil Moss from the Galley Hill Pits, near St. Ives, Hunts. Rep. Huntingdon Fauna Flora Soc. p. 8–9.

DICKSON, J.H. and BROWN, P.D. (1966) Late Post–glacial Meesia longiseta Hedw. in South–eastern England. Trans. Brit. Bryol. Soc. 5(1) p.100.

DICKSON, J.H. (1973) Bryophytes of the Pleistocene. Cambs. Univ. Press.

GILBERT, J.L. Bryophyte records in Rep. Huntingdon Fauna Flora Soc. for the years 1950, 1951, 1953, 1955, 1957 and 1958.

GODWIN, H. and CLIFFORD, M.M. (1939) Studies of the Post–glacial History of British Vegetation. (1) Origin and Stratigraphy of Fenland Deposits near Woodwalton, Hunts. Phil. Trans. R. Soc. B,229 p.324–62.

HORRILL, A.D. (1966) Additions to Hunts. Bryophyte Records. Rep. Huntingdon Fauna Flora Soc. p.5.

HORRILL, A.D. (1967) Huntingdonshire (v.c.31) Bryophytes – New Records. Rep. Huntingdon Fauna Flora Soc. p.5.

HORRILL, A.D. (1968) The moss, Platygyrium repens in Huntingdonshire. Rep. Huntingdon Fauna Flora Soc. p.8.

HORRILL, A.D. (1968) The Genus Sphagnum in Huntingdonshire. Rep. Huntingdon Fauna Flora Soc. p.11–13.

HORRILL, A.D. (1970) Huntingdonshire Bryophyte Records. Rep. Huntingdon Fauna Flora Soc. p.15.

HORRILL, A.D. (1973) The Bryophyta. In Monks Wood, a Nature Reserve Record. Ed. by Steele and Welch. Nature Conservancy.

RATCLIFFE, D.A. (1968) An Ecological Account of Atlantic Bryophytes in the British Isles. New Phytol. 67, p.365–439.

MUSCI

Sphagnum palustre. Rare, damp peaty depression in Birchwood. Holme Fen Decoy, 1966, Horrill. 28.

S. squarrosum Rare, damp peaty hollow in Birchwood. Holme Fen Decoy, 1955, Walters and Proctor. 28

S. recurvum. Rare, damp peaty hollow in Birchwood. Holme Fen Decoy, 1956, Patston and Gilbert. 28

[S. subsecundum var. inundatum.] No recent occurrences traced. c.c. –26.

S. fimbriatum. Rare, damp peaty hollow in Birchwood. Holme Fen Decoy, 1967, Jones. 28.

S. plumulosum. Rare, damp peaty hollow in Birchwood. Holme Fen Decoy, 1959, Jermy. 28.

Atrichum undulatum. Common, on clay soil in woodlands, on ditch sides and occasionally in grassland or on waste ground. Fruit frequent. Monks Wood, 1950, Whitehouse.
c.c. –26 06,. 07, 09, 15, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 38, 39.

Polytrichum piliferum. Rare, on peaty acidic soils. Holme Fen, 1931, Mrs. Garrood. 28.

P. juniperinum. Rare, on peaty acidic soils. Holme Fen, 1931, Mrs. Garrood. 28.

P. aurantiacum. Rare, in birch woodland on peat. Holme Fen, 1955, Walters. c.c. –07 c.c. 26 28.

P. formosum. Common, in woodlands and on the peatlands wherever the substrate is acid and organic. Fruit frequent. Holme Fen, 1931, Mrs. Garrood.
07, 16, 17, 18, 19, 25, 26, 27, 28, 29, 37, 38.

P. commune. Rare, wet places in woodland on the peat. Holme Fen Covert, damp peaty soil, 1964, Birks and Lees. 28.

Fissidens viridulus. Rare, on clay banks in shade. Near Earith, shady bank under elm, 1965, Hill. 26, 37.

F. bryoides. Frequent, on clay surfaces in woods, on ditch sides, fallow fields and waste ground. Fruit frequent. Centre Wood, Elton Furze, 1954, Patston and Gilbert.
09, 16, 17, 18, 19, 25, 26, 27, 28, 37, 38.

F. incurvus. Occasional, on clays in shaded places. Fruit frequent. Monks Wood, 1950 Whitehouse.
16, 17, 18, 25, 27, 28, 37, 38.

F. exilis. Frequent on clay soil in woodlands. Fruit frequent. Gransden Wood, 1959, Townsend.
16, 17, 18, 25, 27, 28, 38.

F. taxifolius. Common, on clay soils in woodlands, damp clay banks, amongst open grassland and stubble. Fruit common. Monks Wood, 1950, Whitehouse. Orton Waterville, Two pond coppice, 1955, Hunt. Fauna Fl. Soc.
A variety of this plant with tubers on the rhizoids has been discovered at Colne gravel–pit in 1965 by H.L.K. Whitehouse.
c.c. –07 c.c. –26 06, 07, 09, 15, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 37, 38.

Pleuridium acuminatum. Occasional, on exposed soil in woodlands, fields and hedge and ditch banks. Woodwalton Fen, 1932, Jones.
16, 17, 28.

P. subulatum. In exposed soil in arable fields and grass bys. Monks Wood in area of grass by, 1967, Paton and Horrill. 17.

Ditrichum cylindricum. On clay and sandy soils. Nr. Gransden Wood, on damp green sand fallow field, 1959, Townsend. 25.

Ceratodon purpureus. Common, on bare soil, wall tops, waste ground and gravel areas. Fruit common. Woodwalton Fen, 1950, Whitehouse.
c.c. –26 06, 07, 09, 15, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 37, 38, 39.

Dicranella schreberana. Found in arable fields on the clay. Ditch side Hilton, 1965, and Agden Green near Great Staughton, in stubble field, 1968, Whitehouse. 16, 26.

D. varia. Occasional, on calcareous clay soils. Monks Wood, 1950, Whitehouse, on overturned tree root, 1967, Horrill.
c.c. –26 17, 18, 27, 28.

D. cerviculata. On clay and peaty dyke banks. Woodwalton Fen, on clay bank of dyke, 1959, Ing. 28.

D. heteromalla. Common, on peat, clay and humus particularly in the woodland areas. Fruit frequent. Monks Wood, 1955, Gilbert. (B.B.S.)
06, 07, 09, 15, 16, 17, 18, 19, 25, 26, 27, 28, 36, 37, 38.

D. staphylina. Found amongst grass and stubble on the clay. Monks Wood, grass ley, 1968, Duckett. 16, 17.

Dicroweisia cirrata. Common, growing as an epiphyte on tree bases and trunks both on the peatlands and the clay. Fruit abundant. Woodwalton Fen, 1940, Edwards, and Gransden Wood 1959, Whitehouse.
06, 07, 09, 15, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 37, 38.

[Dicranum bonjeanii.] Rare if present, reported by Poore (1956) from Woodwalton Fen.

D. scoparium. Local, mainly on the peaty soils and areas of accumulated humus in woodlands. Occasionally on tree bases. Holme Fen, 1931, Mrs. Garrood.
16, 17, 18, 25, 26, 27, 28, 38.

D. polysetum. Woodwalton Fen, 1951, Poore, 28.

Campylopus fragilis. Locally common, on raw peat surfaces in fens. Woodwalton Fen, 1950, Whitehouse. 28.

C. pyriformis. Locally common, on peat surfaces in fen areas also occasionally on humus in woodlands. Holme Fen, heathy ground, 1955, Walters. 28, 29.

C. flexuosus. Occasional, on decaying tree stumps and wood. Holme Fen, 1965, Birks and Lees. Monks Wood, on tree base, 1967, Horrill and Smith. 17, 27, 28.

C. introflexus. Rare, on peat surfaces in woodland. Holme Fen, in birch woodland on peat, near old decoy, 1966, Horrill and Kerr. 28.

Leucobryum glaucum. Rare, raw peat surfaces in fenland woodlands. Holme Fen, middle covert birch wood, 1962, Wood. 28.

Encalypta vulgaris. Walls and chalky banks. Near Holme village, bridge over stream, 1964, Birks and Lees. 18.

E. streptocarpa. Walls and soil where somewhat calcareous. Near Holme village, concrete bridge over stream, 1964, Birks and Lees. 18, 37.

Tortula ruralis. Rare, on old wall and roof–tops. Stibbington, Collyweston slates on roof, 1955, Gilbert.
c.c. –26 09.

T. intermedia. Occasional, on old walls and stonework. Seven Holes Sluice, Earith, 1959, Whitehouse. Stibbington, old limestone wall, 1966, Horrill.
c.c. –07 c.c. –26 09, 37.

T. laevipila. Rare, epiphyte on trunks and larger tree branches. Woodwalton Fen, Ducker.
c.c. –07 c.c. –26 28.

T. latifolia. Seven Holes Sluice, Earith, 1959, Whitehouse.
—c.c. —26 37.

T. muralis. Common, on walls, stonework, bridges and roof—tops. Fruit abundant. Alconbury, on wall, 1928, Mrs. Garrood.
c.c. —07 c.c. —26 In all squares in county.

[Alonia rigida.] No record traced.
c.c. —07.

Pterygoneuron ovatum. On damp soil. Stibbington, on river dredgings, 1945, Gilbert.
c.c. —26 09.

Pottia truncata. Common, on heavy clay soils in woodlands and fields, particularly stubble and grass leys. Fruit common. Near Waresley Wood, 1958, Whitehouse.
c.c. —07 c.c. —26 16, 17, 19, 25, 26, 27, 28, 37.

P. davalliana. On clay soils in fallow areas and woodland rides. Monks Wood 1956, Halliday.
17, 18.

Phascum cuspidatum. Frequent, on the heavy clay soils in stubble fields or grass leys. Fruit frequent. Hail Weston, 1927, Rhodes.
16, 17, 25, 26, 27.

Acaulon muticum. Locally common, on bare ground of stubble fields. Arable field by Monks Wood, 1969, Dransfield, Birks and Birks (B.B.S.) 17.

Cinclidotus fontinaloides. Earith, 1934, Jones; Brownshill Staunch, Over, 1957 and Seven Holes Sluice 1959, Whitehouse. 37.

Barbula convoluta. Common on stone walls, bridges, paths and waste ground. Fruit frequent. Hail Weston on stonework, 1927, Rhodes (C.G.E.).
c.c. —26 06, 09, 16, 27, 28, 37, 38.

[Var. commutata.] No record traced.

B. unguiculata. Common, on walls, bare ground, arable fields and roof slates. Fruit frequent. Kimbolton, 1928, Harrison—Smith.
c.c. —07 c.c. —26 06, 07, 09, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 37, 38.

B. revoluta. Frequent, on walls and rough stoney ground. Yaxley, 1929, P.N.H.S.A.S. annual report.
c.c. —07 c.c —26 16, 19, 27, 37, 38.

B. hornschuchiana. Infrequent, on waste ground and gravel. Wintringham, 1957, Laflin. 17, 25 37.

B. fallax. Frequent, on bare areas of clay such as ditch sides and stream banks. Fruit frequent. Buckden, 1928, Bodger.
c.c. —07 c.c. —26 16, 26, 27, 37.

B. rigidula. Locally common, on walls and stonework. St. Ives on walls, 1911, Evans.
c.c. —26 36, 37.

B. tophacea. Infrequent, on bare soil especially around gravel workings. Colne, near Earith, 1965, Birks and Whitehouse (B.B.S.) 26, 37.

B. cylindrica. Scarce, on walls and stonework. Stone wall at St. Ives, 1970, Horrill.
c.c. —07 c.c. —26 37.

B. vinealis. Locally common, on walls and stonework. Stone walls St. Ives, 1970, Horrill.
c.c. —07 c.c. —26 37.

B. recurvirostra. Occasional, on soil and walls. Chalky clay bank of ditch near A1 and B660 junction, 1964, Birks and Lees (B.B.S.). 18.

Weissia controversa. On clay soils amongst stubble and on fallow areas. Monks Wood, Grass ley, 1968, Little. 17.

W. squarrosa. Bare clay soil in stubble and fallow fields. Monks Wood, Grass ley, 1967, Whitehouse, Dransfield and Horrill (B.B.S.). 17.

W. crispa. On clay soils in stubble fields and grass ley. Woodhurst, 1934, Jones. Monks Wood, stubble area in field, 1967, Duckett. 17, 37.

var. β. aciculata. Monks Wood, stubble area, 1967, Whitehouse, Dransfield and Horrill (B.B.S.). 17.

Grimmia apocarpa. On stonework, mainly where this is limestone or there is a mortar present. Stibbington on stone walls, 1950, Gilbert.
c.c. —07 c.c. —26 09.

G. pulvinata. Frequent, on stonework, walls and bridges. Fruit frequent. Buckden, on walls, 1928, Bodger.
c.c. —07 c.c. —26 06, 07, 09, 15, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 37, 38.

Funaria hygrometrica. Locally abundant, on disturbed ground particularly on the sites of fires in cleared woodland. Fruit abundant. Woodwalton Fen, 1959, Walters.
c.c. —07 c.c. —26 09, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 37, 38, 39.

F. fascicularis. Amongst stubble and in grass leys. Monks Wood, stubble field, 1967, Horrill (B.B.S.). 17.

Physocomitrium pyriforme. On clay soils in stubble fields and grass ley. Monks Wood, stubble field, 1967, Duckett.
c.c. –26, 17.

Physcomitrella patens. Rare, wet ground. Gransden Wood, in swampy ride, 1958, Whitehouse (B.B.S.). 25.
Dr. H.L.K. Whitehouse has informed me that this specimen has been the source of the first biochemical mutant in a bryophyte and further work is being carried out with the plant in the Genetics Department at Cambridge.

Ephemerum serratum. var. minutissimum. Occasional on stubble fields, grass leys and bare areas. Gransden Wood, in swampy ride, 1959, Whitehouse (B.B.S.). 17, 25.

Tetraphis pellucida. Frequent, on dead stumps and rotten logs in woodland areas. Woodwalton Fen, 1946, Richards. 09, 16, 17, 18, 19, 25, 27, 28.

Orthodontium lineare. Occasional, on rotten stumps and wood. Fruit abundant. Gransden Wood, on rotten stump, 1958, Whitehouse. 16, 17, 18, 25, 27, 28, 29.

Leptobryum pyriforme. Occasional, mainly on disturbed sites on the peaty soils of the Fens, also on disturbed ground. Woodwalton Fen, on peat diggings, 1940, Edwards. 28, 29, 39.

Pohlia nutans. Woodland areas on the more acid peaty areas. Woodwalton Fen 1940, Edwards. 25, 28, 29.

P. delicatula. Wet clay areas. Monks Wood, 1956, Jeffrey. 17, 18, 26, 27, 28.

Bryum pseudotriquetrum. var. bimum. Occasional, in wet habitats around the fen areas and the gravel workings. Woodwalton Fen, 1940, Edwards. 09, 28.

B. intermedium. Occasional on stonework. St. Ives on wall by river, 1890, Dixon (C.G.E.). 06, 09, 19, 37.

B. caespiticium. Occasional, on walls and other stonework. Yaxley, 1929, P.N.H.S.A.S.
c.c. –07 c.c. –26 09, 19.

B. argenteum. Common, on walls, footpaths and waste ground particularly around the towns and villages. Fruit common. Walls in Huntingdon, 1928, Bodger.
c.c. –26 All squares in county

[var. lanatum] c.c. –26.

B. bicolor. Common, bare soil and waste ground. Fruit common, Stanground, 1928, Baxter. All squares in county.
A variety with small bulbils has been collected by Hill and Whitehouse from Colne gravel pit, 10 Km. square 37.

B. micro-erythrocarpum. Amongst the bases of grass tussocks. Woodwalton Fen, base of Calamagrostis tussock, 1963, Woodell. 28.

B. rubens. Frequent, on soil and peat surfaces particularly stubble fields. Stubble field near Waresley Wood, 1958, Whitehouse. 16, 17, 18, 25, 26, 27, 28, 37, 38.

B. klinggraeffii. On bare ground, particularly arable fields. Stubble field near Waresley Wood, 1958, Whitehouse. 16, 17, 25, 26, 37.

B. alpinum. Rare, on soil and gravel. Colne gravel pit, on derelict arable field, 1965, Lees. 37.

B. capillare. Common, on walls, stonework and trees, Fruit frequent. Alconbury, 1928, Mrs. Garrood.
c.c. –26 06, 07, 08, 09, 15, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 37, 38.

B. bornholmense. Exposed peat and soil surfaces. Woodwalton Fen in grassland, 1963, Woodell. 28.

B. ruderale. On bare soil in fields and woodland rides. Monks Wood, in woodland ride, 1950, Whitehouse. 17, 18, 27, 28.

Mnium hornum. Common, on soil and tree bases in woodlands. Fruit common. Holme Fen, on bases of birch trees, 1948, Rose. 06, 09, 16, 17, 18, 19, 25, 26, 27, 28, 37, 38.

M. longirostrum. Occasional, amongst bryophyte mat in woodlands, on the clay and peat substrates. Fruit occasional. Monks Wood, 1956, Jeffrey. 18, 28.

M. affine. Rare, found amongst the bryophyte mat in woodland. Holme Lode, 1954, Gilbert (B.B.S.) 25, 28, 37.

M. undulatum. Common, on the woodland floor, in grassy areas on ditch and bank sides. Woodwalton Fen, 1950, Whitehouse.
c.c. –07 c.c. –26 07, 09, 16, 17, 18, 19, 25, 26, 27, 28, 29, 37, 38.

M. punctatum. Occasional, mainly on the sides of ditches and streams in woodland areas. Fruit rare. Woodwalton Fen, 1940, Edwards. 17, 25, 28.

Aulacomnium palustre. Rare, amongst Sphagnum in an overgrown decoy at Holme Fen. Holme Fen, 1967, E.W. Jones (B.B.S.) 28.

A. androgynum. Occasional, on damp rotten wood and on peat in the fenland areas. Holme Lode Covert, 1953, Gilbert (B.B.S.) 19, 28, 29.

[Zygodon viridissimus.] Old record for St. Ives, Sedgewick. No recent records traced.
c.c. –26

Orthotrichum anomalum. Rare, on walls and stonework. Fruit frequent. Stibbington, common on walls, 1950, Gilbert.
c.c. –07 09.

O. affine. Rare, epiphytic on trees. Fruit frequent. Woodwalton Fen, as an epiphyte, 1959, Ducker.
c.c. –26 09, 28.

[O. lyellii.] No records traced
c.c. –07 c.c. –26.

O. diaphanum. Rare, on walls and stonework. Fruit frequent. Kimbolton, 1927, Rhodes. 06, 09.

Ulota crispa. Rare, as an epiphyte. Monks Wood, tree by Badger Ride Pond, 1967, Birks (B.B.S.) 17.

Fontinalis antipyretica. Occasional, attached to stones, wood, or tree roots in the Ouse, and in lakes, dykes and ponds. Huntingdon, in pond, 1953. Davies.
c.c. –26 27, 28, 37.
var. cymbifolia recorded from square 27 by W.E. Nicholson, 1901 (Whitehouse, pers. comm.).

[F. squamosa.] c.c. –26.

Climacium dendroides. Rare, usually amongst grass in wet fen or woodland paths and rides. Woodwalton Fen, 1957, Halliday. 28.

[Leucodon sciuroides.] No records traced.
c.c. –26.

Neckera complanata. Occasional, on tree bases and roots in hedgerow and woodland areas. Wennington Wood, 1955, Patston and Gilbert.
c.c. –07 c.c. –26 17, 18, 25, 27, 28.

Omalia trichomanoides. Occasional, on tree stumps and roots in woodlands, scrub at hedgebanks. Fruit occasional. Monks Wood, 1950, Whitehouse. Wennington Wood, 1955, Patston and Gilbert.
c.c. –26 27, 28.

Thamnium alopecurum. Common, soil, tree bases and other wood in woodlands on the clay soils. Fruit rare. Ripton Wood (Wennington Wood), 1794, Skrimshire (Wisbech Museum)
c.c. –26 06, 07, 09, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 37, 38.

Leskea polycarpa. Rare, on tree bases and roots by water. The Bulwark, Earith Washes, June 1959, Whitehouse. Woodwalton Fen, on Sallow stems, Dec. 1959, Ing.
c.c. –07, c.c. –26 28, 37.

Anomodon viticulosus. Locally common, found on soil, tree roots or bases of walls here the soil is calcareous. Fruit occasional where species grow on streamsides. Monks Wood, 1950, Whitehouse; 1955, Gilbert (B.B.S.). 17, 18, 19, 27, 28.

Thuidium tamariscinum. Common, as a component of the bryophyte carpet in woodlands on the clay soils, particularly well developed carpets occur under old degenerating thickets of Blackthorn and other scrub species. Monks Wood, 1950, Whitehouse, Upton Wood, 1954, Gilbert.
c.c. –26 16, 17, 18, 25, 26, 27, 28, 36, 38.

Cratoneuron filicinum. Occasional, in wet places on calcareous clay, woodland rides and around gravel pits. Stibbington, around gravel pits, 1955, Gilbert. 09, 17, 18, 27, 28.

Campylium stellatum. Rare, sedge and reed beds. Woodwalton Fen, mixed sedge and reed beds, 1959, Ducker. 28.

C. protensum. Wet calcareous clay. Monks Wood, in woodland ride, 1950, Whitehouse. 18.

C. polygamum. Rare, in sedge and reed beds. Woodwalton Fen, mixed sedge bed, 1959, Ducker. 28.

Leptodictyum riparium. Rare, on wood or soil by ponds and dykes. Woodwalton Fen, 1957, Halliday. 28.

Amblystegium serpens. Common, on decaying stumps and wood in damp woodland areas, also on living tree bases. Fruit frequent. Alwalton, 1929, Northamptonshire Natural History Society
c.c. –07 c.c. –26 06, 07, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 37, 38.

A. juratzkanum. Rare, damp areas Woodwalton Fen. Woodwalton fen, 1940, Edwards. 28.

Drepanocladus aduncus. Occasional, in wet places by the sides of ponds and dykes. Holme Fen, peat cutting 1948, Rose. 09, 17, 28.

Acrocladium cordifolium. Local, in damp peaty areas at Holme Fen. Holme Fen, 1948 collected F. Rose determined E.F. Warburg. 28.

A. giganteum. Rare, on wet peat habitats at Woodwalton Fen. Also recorded as sub–fossil by Godwin and Clifford (1939). Woodwalton Fen, 1959, B. Ducker also B. Ing. 28.

A. cuspidatum. Common on damp tracks, in wet fields and meadows and on the damper areas of the peat. Wet areas at Alwalton, 1929, Northamptonshire Natural History Society
c.c. –07 c.c. –26 06, 07, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 37, 38.

Isothecium myurum. Occasional, as an epiphyte on tree bases in woodland areas. Fruit rare. Monks Wood, on tree stump, 1946, Richards. 09, 16, 17, 18, 25, 27, 28, 38.

I. myosuroides. Common, on tree stumps and bases. Fruit occasional. Monks Wood, 1956, Jeffrey. 06, 07, 09, 16, 17, 18, 19, 25, 26, 27, 28, 37, 38.

Camptothecium sericeum. Common, on walls, stonework and trees. Fruit occasional. Monks Wood, on tree base, 1950, Whitehouse.
c.c. –07 c.c. –26 06, 07, 09, 15, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 37, 38.

[C. lutescens.] No records traced.
c.c. –07 c.c. –26

Brachythecium albicans. Rare, on heathy ground. Woodwalton Fen, 1950, Whitehouse.
c.c. –07 c.c. –26 28, 37.

B. rutabulum. Common, on tree stumps, fallen wood, stones and walls. Fruit frequent. Hartford, 1929, Mrs. Alderson.
c.c. –07 c.c. –26 06, 07, 08, 09, 15, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 37, 38, 39.

B. velutinum. Occasional, growing on dead and living wood. Stumps, Upton Wood, 1951, Peterken and Wallace. Woodwalton Fen, 1959, Ducker. 18, 28.

B. populeum. Rare, on wood. Woodwalton Fen, growing on wood, 1964, Wallace. 28.

Cirriphylum piliferum. Common, shady areas in woodlands on the clay, often amongst the grass at the edges of woodland rides. Monks Wood, 1930, Richards. Wennington Wood, 1955, Patston and Gilbert. 07, 09, 15, 16, 17, 18, 19, 25, 26, 27, 28, 29, 38.

C. crassinervum. Frequent, in woodlands on heavy clay soils. Kimbolton, 1928, Harrison–Smith. 06, 07, 09, 16, 17, 18, 19, 25, 26, 27, 28, 29, 37.

Eurhynchium striatum. Common, often the main bryophyte on the ground in woodlands also frequent in grass on the chalkier clays. Fruit occasional. Alconbury, 1928, Mrs. Garrood. 06, 07, 09, 15, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 37, 38.

E. praelongum. Common, on soil and tree bases in woodlands also amongst grass and in overgrown hedges. Fruit occasional. Alconbury, 1929, Mrs. Garrood.
c.c. –07 c.c. –26 All squares in county.

E. swartzii. Frequent, occasionally found in woodland particularly in the grassy rides, amongst open stubble and grass leys, often found invading lawns on the clay soils. Fruit rare. Orton Longueville, 1929, Cullum.
c.c. –26 09, 16, 17, 18, 19, 25, 26, 27, 28, 37.

[E. speciosum.] Recorded 1928 at Stanground by Baxter.

E. riparioides. Rare, on stones or wood, in or near running water. Near Waresley Wood, bricks in stream just outside wood, 1958, Whitehouse.
c.c. –26, 25.

E. confertum. Frequent, on soil, tree bases, stones and walls. Kimbolton, 1929, Harrison–Smith.
c.c. –07 06, 09, 16, 17, 18, 27, 28, 37, 38.

Rhynchostegiella pumila. On soil and tree bases in woodland. Wennington Wood, 1955, Gilbert and Patston (B.B.S.) 18, 25, 28.

Pseudoscleropodium purum. Common, with other pleurocarps in woodland bryophyte carpets also amongst the grass in woodland rides and other grassy places. Fruit rare. Holme Fen, 1931, Mrs. Garrood
c.c. –07 09, 17, 18, 19, 25, 27, 28.

Pleurozium schreberi. Frequent, on more acid soils and peat often in open grassy rides in woodland. Woodwalton Fen, 1959, Ing. (B.B.S.) 16, 17, 18, 19, 27, 28, 29, 38.

Plagiothecium denticulatum. Occasional, woodland areas on organic substrates Holme Fen 1948, Rose. 16, 17, 18, 26, 27, 28, 29, 38.

var. γ denticulatum. Gransden Wood, S.E. end, 1965, Chamberlain. 25.

P. ruthei. Occasional, Holme Fen, old decoy amongst Phragmites and Juncus, 1967, Jones (H.B.M.). 17, 28.

P. curvifolium. Occasional, woodland areas. Holme Fen, birch stump, 1964, Birks and Lees. 17, 28.

P. sylvaticum. Occasional, on soil and litter in woodlands. Monks Wood, 1930, Richards. 16, 17, 18, 25, 27, 28.

Platygyrium repens. Rare, as an epiphyte on scrub and trees. Monks Wood, on Dogwood scrub near Stocking Close Pond, 1968, Duckett (B.B.S.) 18, 28.

Hypnum cupressiforme. Common, on soil, trees, stonework. Fruit frequent. Alconbury, 1928, Mrs. Garrood.
c.c. –07 c.c. –26 All squares in county.

var. resupinatum. Frequent, as an epiphyte on trees. Gransden Wood, on tree trunk, 1959, Whitehouse (B.B.S.) 06, 18, 25, 28, 38.

var. ericetorum. Occasional in heathy places. Woodwalton Fen, 1959, Walters. 28.

H. lindbergii. Rare, in damp woodland rides where the clay is calcareous. Brampton Wood, in grass on ride, 1959, Swinscow. 16, 17, 18.

Ctenidium molluscum. Locally common, on calcareous clay in woodlands and occasionally in grassland. Woodwalton Fen, 1932, Jones. 16, 17, 18, 19, 25, 27, 28, 37.

Rhytidiadelphus triquetrus. Frequent, amongst other pleurocarps in open woodland areas or in grassy spots in rides and clearings. Stibbington, 1836, Berkeley. 09, 16, 17, 18, 19, 25, 27, 28, 38.

R. squarrosus. Frequent grassy rides and clearings in woodland, meadows and lawns. Fruit rare. Alwalton, 1929, P.N.H.S.A.S.
c.c. –07 c.c. –26 16, 17, 18, 19, 25, 26, 27, 28, 29, 37, 38, 39.

Hylocomium splendens. Rare, amongst grass on woodland rides. Monks Wood, Badger ride amongst grass, 1966, Horrill (B.B.S.). 17.

HEPATICAE

Conocephalum conicum. Locally abundant, on the banks of streams and ditches on the clay. Male inflorescences frequent, female not recorded. Monks Wood, stream banks, 1950, Gilbert. 17, 18, 25, 26, 28.

Lunularia cruciata. Frequent, in gardens and on disturbed ground. Stibbington, in garden, 1949, Gilbert. 09, 26, 27, 37.

Marchantia polymorpha. Locally abundant, in wet areas in peat cuttings, on exposed peat surfaces, fire sites and garden areas. Fruit frequent. Holme Fen, wet peat cutting, 1948, Rose. 09, 18, 19, 25, 28, 29, 37, 38.

var. β. aquatica. Rare, in wet places on peat. Holme Fen, dyke by roadside, 1964, Birks. 28.

Riccia glauca. On clay in fallow and stubble fields. Near Gransden Wood, fallow field, 1959, Townsend. 25.

R. sorocarpa. On clay in fallow and stubble fields. Near Waresley Wood, stubble field, 1958, Whitehouse. 25.

R. fluitans. Frequent, in fenland dykes and drains. Woodwalton Fen, 1956, Walters. 28, 29, 39.

Ricciocarpus natans. Occasional, dykes and drainage channels in the Fenland areas. Woodwalton Fen, drainage ditch, 1949, Davies and Doney. 18, 28, 29, 39.

Riccardia sinuata. Rare, moist places. Holme Fen, 1948, Rose. 17, 28.

R. pinguis. Rare, on damp clay surfaces. Warboys, on clay near brickpit, fruiting, 1955, Gilbert. 17, 38.

Pellia endiviifolia. Common, on streamsides and damp clay areas particularly in woodlands. Fruit occasional. Monks Wood, stream banks, 1950, Whitehouse; 1955, Gilbert. 09, 16, 17, 18, 25, 26, 27, 28, 36, 37, 38.

Metzgeria furcata. Occasional, as an epiphyte in older more undisturbed areas of woodland mainly on oak and ash. Monks Wood, epiphyte on tree, 1956, Jeffrey. 17, 18, 25, 26, 27, 28, 37, 38.

Fossombronia pusilla. Rare, on clay soils in woodland rides, stubble fields and grass leys. Gransden Wood, swampy woodland ride, 1959, Whitehouse (B.B.S.) 17, 25.

Calypogeia fissa. Occasional, on peat surfaces in the fenland area and on the sides of ditches and dykes on the woodlands on the clay. Woodwalton Fen, on peat, 1929, Richards. 17, 18, 27, 28.

Plagiochila asplenioides. var. α asplenioides. Moist shady places amongst other bryophytes. Wennington Wood, ditch by main ride, 1955, Patston and Gilbert det. Paton. 18, 28.

var. β. major. Moist shady spots particularly in bryophyte carpets with Thuidium tamariscinum and Eurhynchium striatum. Monks Wood, 1955, Patston and Gilbert det. Paton. 16, 17, 18, 25, 27, 28, 38.

Lophocolea bidentata. Frequent, in grassy places such as woodland rides, clearings etc. Holme Lode Covert, 1953, Gilbert det. J. Paton. 16, 17, 18, 25, 27, 28, 29, 38.

L. cuspidata. Rare, on rotting wood. Near Waresley and Gransden Woods by Great Gransden, on rotten stump, 1965, Chamberlain. 25, 28.

L. heterophylla. Frequent, as on epiphyte on live and dead wood. Elton Furze, centre wood of three, on wood, 1954, Patston and Gilbert conf. Paton. 07, 09, 15, 16, 17, 18, 19, 25, 26, 27, 28, 29, 36, 37, 38, 39.

Chiloscyphus polyanthos. Occasional, wet ditch and streamsides and on damp soil. Monks Wood, 1956, Jeffrey. 17, 18, 27, 28.

C. pallescens. Occasional, in ditches and on moist soil. Monks Wood, 1955, Patston and Gilbert. 17, 18, 25, 27, 28, 38.

Cephaloziella starkei. Rare, on peaty soils. Woodwalton Fen, 1959, Ing. 28.

Cephalozia bicuspidata. On damp soil and peat. Woodwalton Fen, 1959. Ducker. 28.

C. media. On tree bases. Monks Wood, on tree stump, 1967, Pitken. 17, 18, 28.

Radula complanata. Occasional, as an epiphyte in more undisturbed woodland areas. Monks Wood, 1956, Jeffrey; Woodwalton Fen, epiphyte on Sallow, 1959, Ing. 17, 18, 28.

Frullania dilatata. Rare, as an epiphyte. Woodwalton Fen on birch bough, 1959, Ing. 28.

TWO RARE HUNTINGDONSHIRE FUNGI

J.L. Gilbert

The Herbarium, Royal Botanic Gardens, Kew

Two rare fungi have been recorded for the county by Dr. D.A. Reid of the Herbarium, Royal Botanic Gardens, Kew. On 1st April 1973 he collected from Houghton Urocystis eranthidis (Pass.) Ainsw. & Samps. on winter aconite. This very rare smut fungus has been recorded for the neighbouring county of Cambridgeshire. In a paper on New or interesting records of British Hymenomycetes IV [Trans. Brit. Mycol. Soc., 55 (3), 413–441 (1970)] Dr. Reid records Myxarium laccatum (Bourd. & Galz.) D.A. Reid new to Britain. He collected this 'jelly fungus' from beneath the bark of a twig of a lime tree (Tilia sp.) at Houghton on 15th March 1969.

HEMIPTERA RECORDS, 1973

M.G. Morris

Monks Wood Experimental Station

Overshadowing other events of the year was the untimely death of Wilf Russell. Among his many entomological interests the Heteroptera had, in recent years, become a favourite. Although much of his collecting was done near Peterborough or further afield in East Anglia he made many important discoveries in Huntingdonshire, particularly in Monks Wood and Holme Fen. His loss is a sad blow to the study of Heteroptera in the county.

There are fewer records of Huntingdonshire Hemiptera than usual, partly because I was unable to do very much recording after the end of June. However, several interesting species were found, some in rather suprising places. As in 1972, special attention was given to the reserves of the Bedfordshire and Huntingdonshire Naturalists' Trust. Species new to the county are indicated by an asterisk * and the reference numbers of the Heteroptera are those in Southwood and Leston (1959). For convenience, nomenclature of Hemiptera follows Kloet and Hincks (1964) while the names of plants are those in Clapham et al. (1962).

HETEROPTERA

31. Eysarcoris fabricii (Kirk.). Ramsey Heights claypits, 17th June 1973. On Stachys sylvatica.

119 Scolopostethus affinis (Schill.). A flourishing colony under Erica vagans in a garden peat–bed at Hemingford Grey, 2nd September 1973.

133. Cymus glandicolor Hahn. Swept from pond–side vegetation, Sawtry Abbey, 6th June 1963.

139. Berytinus minor (H.–S.). At roots of grasses and Trifolium repens Monks Wood Experimental Station fields, 28th June 1973.

159. Tingis ampliata (H.–S.). Ramsey Heights claypits, 17th June 1973, by sweeping. Usual host is Cirsium arvense.

160. T. cardui (L.). Swept at Sawtry Abbey, 6th June, 1973 probably from Cirsium vulgare.

178. Nabis rugosus (L.). Pingle Wood Cutting, 7th June 1973.

190. Anthocoris confusus Reut. On various trees. Archer's Wood, 5th May 1973. Pingle Wood Cutting 7th June 1973.

192. A. nemoralis (F.). Also arboreal. Ramsey Heights claypits, 17th June 1973.

197. A. nemorum (L.). Archer's Wood, 5th May 1973.

202. Orius majusculus (Reut.). Archer's Wood, 5th May 1973, mostly on Salix cinerea.

244. Amblytylus nasutus (Kirschb.). Swept from grasses. Ramsey Heights claypits, 17th June 1973. Marsh Lane gravel pits, Hemingford Grey, 23rd June 1973.

252. Phylus palliceps Fieb. A single larva beaten from oak at Pingle Wood Cutting, 7th June 1973 was reared to the adult stage.

257. Psallus ambiguus (Fall.). Ramsey Heights claypits, 17th June 1973, beaten from apple.

*277. Plagiognathus albipennis (Fall.). Several bugs of both sexes swept from Artemisia vulgaris, Marsh Lane gravel pits, Hemingford Grey, 23rd June 1973.

279. P. chrysanthemi (Wolff). General sweeping, Marsh Lane gravel pits, 23rd June 1973.

303. Campyloneura virgula (H.–S.). Plentiful on hawthorn, Hemingford Grey, 7th July 1973.

326. Heterotoma planicornis (Pallas). Taken by general sweeping. Ramsey Heights claypits, 17th June 1973. Hemingford Grey, 7th July, 1973.

393. Stenotus binotatus (F.). Swept from grasses, Marsh Lane gravel pits, Hemingford Grey, 23rd June 1973.

404. Capsus ater (L.). Ramsey Heights claypits, 17th June 1973.

411. Stenodema calcaratum (Fall.). Sawtry Abbey, swept from long grass, 6th June 1973.

413. S. laevigatum (L.). Also on tall grasses. Sawtry Abbey, 6th June 1973. Ramsey Heights claypits, 17th June 1973.

434. Saldula saltatoria (L.). On sparsely vegetated mud at edge of ponds, Sawtry Abbey, 6th June, 1973.

AUCHENORHYNCHA

Philaenus spumarius (L.). Marsh Lane gravel pits 23rd June 1973, Hemingford Grey village 7th July 1973.

Agallia brachyptera (Boh.). This normally rare species continues to be abundant in Monks Wood Experimental Station Fields (vide Morris 1973). Larvae were also found at Ramsey Heights claypits 17th June 1973, and in Pingle Wood Cutting 1st July 1973.

Psammotettix confinis (Dahlbom). Swept at Ramsey Heights claypits, 17th June 1973.

Cicadula quadrinota (F.). Swept from tall grass at Sawtry Abbey, 6th June 1973.

Zygina scutellaris (H.–S.). Swept from mixed grasses at Ramsey Heights claypits, 17th June 1973.

*Eupteryx collina (Flor). On Ballota nigra at Hemingford Grey, first recorded 3rd June 1973.

*E. melissae Curt. Also on Ballota nigra at Hemingford Grey, first recorded 5th June 1973.

E. signatipennis (Boh.). On Filipendula ulmaria, the usual foodplant, in Raveley Wood, 8th June 1973.

E. urticae (F.) On nettles at Ramsey Heights claypits, 17th June 1973.

Stenocranus minutus (F.). Swept from coarse grasses. Pingle Wood Cutting, 7th June 1973. Ramsey Heights claypits, 17th June 1973.

*Chloriona dorsata Edwards. This rare species was known to Le Quesne (1960) from only two British localities : Lymington, Hants. and Epping Forest, Essex. It occurred in two widely separated Huntingdonshire localities in 1973. At Ramsey Heights claypits on 17th June 1973 there was a strong colony on Phragmites communis around the pond and another good colony, also on reed, was found at the Marsh Lane gravel pits, Hemingford Grey on 23rd June 1973. In both places none of the common Chloriona spp. was present.

*C. glaucescens Fieb. On Phragmites communis near the road and well away from the pond at Ramsey Heights claypits, 17th June 1973. Neither of the only two Chloriona species recorded by Le Quesne (1965) from Woodwalton Fen, C. smaragdula (Stal) and C. unicolor (H.–S.), was found at Ramsey Heights. All the British species are associated with Phragmites.

Euides speciosa (Boh.). Taken on Phragmites communis with Chloriona glaucescens, i.e. near the road, at Ramsey Heights claypits, 17th June 1973.

Eurybregma nigrolineata Scott. Ramsey Heights claypits, 17th June 1973, swept from grasses.

Criomorphus albomarginatus Curtis. By general sweeping at Sawtry Abbey, 6th June 1973.

Laodelphax elegantulus (Boh.). Swept from tall grasses at Ramsey Heights claypits, 17th June 1973.

Javesella dubia (Kirschb.). By sweeping in damp rides, Raveley Wood, 8th June 1973.

J. forcipata (Boh.) With J. dubia in Raveley Wood, 8th June 1973.

*J. obscurella (Boh.). Swept from short and sparse grasses growing in a dried out pond at Sawtry Abbey, 6th June 1973.

REFERENCES

Clapham, A.R. Tutin, T.G. and Warburg, E.F. (1962) : Flora of the British Isles (2nd ed.), London.

Kloet, G.S. and Hincks, W.D. (1964) : A check list of British insects (2nd ed.) pt. 1, London.

Le Quesne, W.J. (1960) : Hemiptera, Fulgoromorpha. Handbk Ident Br. Insects 2 (3), 1–68.

Le Quesne, W.J. (1965) : A preliminary list of the Auchenorhyncha of Woodwalton Fen, Huntingdonshire. Entomologist's mon. Mag. 100 (1964), 252.

Morris M.G. (1973) : Hemiptera Report, 1972. Rep. Huntingdon Fauna Flora Soc. 1972, 54–61.

Southwood, T.R.E. and Leston, D. (1959) Land and Water Bugs of the British Isles, London.

NEW COLEOPTERA RECORDS FOR HUNTINGDONSHIRE

R. Colin Welch

Monks Wood Experimental Station

1973 saw the publishing of the book Monks Wood : A Nature Reserve Record, edited by R.C. Steele and myself. This contains accounts and annotated lists of most orders of insects and includes a list of some 1017 species of Coleoptera together with an extensive bibliography. During research for this book a number of early records by Prof. C.C. Babington and G.R. Crotch of Cambridge were unearthed dating back to 1828. In the period since the book went to press a further three species have been added to the list of Coleoptera, and these will be included in my fourth supplement when it is published.

G.N. Foster paid a brief visit to Monks Wood National Nature Reserve in 1972 and collected 34 species of water beetle. He subsequently published a note (1973) on two rare species of palpicorn previously unrecorded from the county. I have included these in the following list which contains only six species new to the county including one accidentally introduced from the United States of America.

Nomenclature follows that of Kloet & Hincks 1954.

HYDRAENIDAE

Ochthebius pusillus Steph. Two specimens recorded by Foster (1973) splashed from the clayey bank of Lower Pond (71) Monks Wood on 25th June 1972.

Hydraena nigrita Germ. Two specimens taken by Foster (1973) in Lower Pond together with the commoner H. riparia Kug.

SCARABAEIDAE

Amphimallon solstitialis (L.) 'The Summer Chafer', 1 male and two females collected by H. Bell during the first week of July 1973 'up a chimney' in Peterborough.

Phyllophaga sp. On 14th June 1973 Prof. K. Mellanby was contacted by the County Medical Officer for Health for advice on an infestation of insects in a U.S.A.F. aircraft due to land at Alconbury from Texas. The insects turned out to be a species of chafer and were killed by spraying with Pyrethrum. Specimens were sent to R.D. Pope at the British Museum (Natural History) who identified them as Phyllophaga probably crinata (Burm.) although there are about one hundred species of this genus known from Texas.

ANOBIIDAE

Ernobius mollis (L.) One female collected on 20th July 1973 on art exhibition at East of England Show, Allerton, Peterborough.

TENEBRIONIDAE

Gnathocerus cornutus (F.) 'The Broad–horned Flour Beetle', adults and larvae collected on or about 12th November 1973 by H. Bell from a bakery in Peterborough.

REFERENCES

Foster, G.N. 1973. Two rare palpicorns (Col.) in Monks Wood Nature Reserve. Entomologist's mon. Mag., 108 : 79.

Kloet, G.S. & Hincks, W.D. 1945. A checklist of British Insects. Stockport, 483 pp.

Steele, R.C. & Welch, R.C. 1973. Monks Wood : A Nature Reserve Record, Nature Conservancy, 337 pp.

Welch, R.C. (in press). The Coleoptera of Monks Wood National Nature Reserve, Huntingdonshire, Fourth Supplement, 1971–1973. Ent. Gaz.

RECORDS OF NEW AND UNCOMMON HUNTINGDONSHIRE WEEVILS (COLEOPTERA, CURCULIONOIDEA)

M.G. Morris

Monks Wood Experimental Station

Several years have passed since I last recorded weevils new to the county and its National Nature Reserves (Morris, 1968). During the intervening years Dr. Welch has added a few species to the county list (1970a; 1972) and others to the list for Monks Wood (1970b; 1973). However, several other records, of species either new to Huntingdonshire or interesting in other ways, have been made during the period 1969–1973 and it seems desirable to publish these to bring the lists up to date. As in my earlier accounts (1963; 1965; 1968) all species new to Huntingdonshire or the National Nature Reserves of Monks Wood, Woodwalton Fen and Holme Fen are noted. Such records are prefixed by the symbols *, M, W and H respectively. Many weevils have been recorded from the nature reserves of the Bedfordshire and Huntingdonshire Naturalists' Trust but only a few of the more interesting occurrences in these reserves (and a few other places) can be mentioned here. To save space I have not included the habitat type (Elton and Miller, 1954) where each species was found but this information has been recorded and is available in manuscript form.

ATTELABIDAE

W Caenorhinus longiceps Thoms. A single example swept from under birch trees in eastern Copper Field, 16th July 1964, was omitted from earlier notes.

APIONIDAE

W Apion aestivum Germ. A single male swept in the Fen, 3rd June 1962, had previously been misidentified as A. assimile Kirby (recorded from the reserve by Buck (1962)).

H A. curtirostre Germ. A single example was swept from Rumex acetosella agg. near the main–line Railway (Denton Fen), 31st May 1969.

H A. haematodes Kirby. A male was taken with the A. curtirostre recorded above.

A. miniatum Germ. A male swept in Top Ride, near Owl Ride, Monks Wood 2nd June 1969, confirms an old record in Omer–Cooper (1926), repeated by Welch (1973).

A. ononicola Bach. Although recorded by Omer–Cooper (1926) inland records of this species (often confused with others) are rare so that it seems worthwhile to put on record two females swept at Great Stukeley, 23rd July 1967.

A. pallipes Kirby. Since the first Huntingdonshire record at Honeyhill Wood, Kimbolton (Morris, 1968) this species has been taken at Leycourt, 27th April 1969, and Gamsey Wood, 8th May 1972 by sweeping Mercurialis perennis. The last locality is very near Monks Wood in which frequent searching has failed to locate A. pallipes.

*A. platalea Germ. A single specimen was swept from roadside vegetation in a lay–by at Sibson, 1st June 1969.

*A. pubescens Kirby. A female was taken by 'vacuum sampling' in Monks Wood Experimental Station fields (outside the reserve), 27th July 1971.

A. urticarium (Herbst). It is unusual to find this species off the peat of the Fens, where it is common, but it occurred on clay at Sawtry Abbey, 6th June 1972.

CURCULIONIDAE

*Otiorhynchus ovatus (L.). One specimen was beaten from brambles on the railway track at Orton Waterville, 7th August 1971. The species is usually associated with sandy situations.

O. rugosostriatus (Goeze). Previously recorded only once, from St. Ives (Morris, 1965), this species was found, also indoors, at Hemingford Grey, 25th August 1972.

O. singularis (L.). Although there is an old record in Omer–Cooper (1926) this species has been omitted from the Monks Wood list (Welch, 1973). It is perhaps more likely to occur in the wood than many of the other species recorded from there in the past. It is generally abundant in Britain and is found in Holme Fen (Morris 1965).

O. sulcatus (F.). First recorded from the county (St. Ives) by Welch (1970a), a further specimen was found in Hemingford Grey, 7th August 1971. In both cases this common British species was taken indoors.

W. Phyllobius argentatus (L.). Two examples beaten from trees in the Fen, 3rd June 1962, but hitherto overlooked.

*P. calcaratus (F.). Three specimens were collected at Elton Furze 12th June 1971, two by sweeping and one by beating birch.

P. pomaceus Gyll. This species is recorded without details from Monks Wood by Welch (1973). After looking for several years for the species I too collected it in the wood, my pair of specimens coming from nettles growing in Top Ride, 19th May 1971.

M P. pyri (L.). Suprisingly, this generally very common species has only recently been found in Monks Wood. I beat an example from Salix cinerea in Hotel Ride, 28th May 1971. In some places, such as Castor Hanglands, it swarms on oaks and other trees in spring but in Monks Wood it is evidently a straggler.

*Liophloeus tessulatus (Mull.). Two specimens were found on nettles along the footpath from St. Ives to Holywell, 5th May 1968 by R. Bertioli. I obtained another by beating Hedera helix at Sibson on 1st June 1969.

*Bagous tempestivus (Herbst). Three examples were taken at Earith, 8th May 1971, by sweeping in a damp meadow.

Dorytomus filirostris Gyll. This local species, discovered in Britain in 1947, occurred on Populus sp. at a second Huntingdonshire locality, Little Paxton gravel pits, 30th May 1971.

H D. rufatus (Bedel). Two specimens were beaten from Salix cinerea near Short Drove, 31st May 1969.

W D. tortrix (L.). An example was beaten from Populus tremula in compartment 128N on 17th June 1968.

*Tychius stephensi Gyll. Taken by sweeping calcareous clay grassland at Pingle Wood Cutting, 13th May 1969 and 7th June 1973. The clay grassland here is much like the chalk and limestone vegetation where the species is more usually taken.

H. Curculio venosus (Grav.). A male was beaten from oak near the Holme Fen Post, 14th May 1971.

*Ceuthorhynchidius barnevillei Grenier. A singleton was swept from grassland in Pingle Wood Cutting, 13th May 1969.

Ceuthorhynchus asperifoliarium (Gyll.). This species is common at Woodwalton Fen where it is associated with Symphytum officinale, one of its boraginaceous foodplants. Single specimens were swept in Raveley Wood on 24th August 1972 and the following day. There seems to be no obvious foodplant for the species in the wood.

C. litura (F.). As in the case of Phyllobius pomaceus this species appears to have recently colonised Monks Wood, where it was recorded by Welch (1973). An unusually large stand of the foodplant, Cirsium arvense, occurred in Hotel Ride in 1971, where I swept one C. litura on 9th August 1971.

H C. pollinarius (Forst.). A specimen was taken from nettles near Sawtry Rough, 31st May 1969.

H. Rhinoncus bruchoides (Herbst). Dr. B.N.K. Davis brought me a weevil of this species which was taken from mixed vegetation on the eastern side of Holme Fen at TL 211883 on 18th May 1971.

H R. castor (F.). This species occurred on Rumex acetosella agg. with Apion curtirostre and A. haematodes, as recorded above.

H Phytobius comari (Herbst). Two examples were taken from Lythrum salicaria growing on a dykeside near Holme Lode, 31st May 1969.

W Amalorrhynchus melanarius (Steph.). This species, added to the Huntingdonshire list by Welch (1972), occurred as a single specimen on Nasturtium officinale agg. in a dyke in compartment 128 on 17th June 1968.

*Gymnetron labile (Herbst). Single examples were taken by sweeping at Pingle Wood Cutting, 13th May 1969, and near Bevill's gate, Monks Wood Experimental Station grounds (outside the reserve), 29th August 1972. The species is associated with Plantago lanceolata.

G. veronicae (Germar). The record in Omer–Cooper (1926) for G. beccabungae (L.) refers to this species. Additional records are: Marsh Lane gravel pits, Hemingford Grey, 14th June 1970; St. Neots Holt, 15th May 1971; and Sawtry Abbey, 6th June 1973.

*G. villosulum Gyll. This weevil has occurred on species of Veronica at Marsh Lane gravel pits, Hemingford Grey, 14th June 1970; Farcet Meadows, 27th June 1971; and Sawtry Abbey, 6th June 1963.

*Miarus graminis (Gyll.). Two specimens were found in flowers of Campanula rotundifolia at Wansford Quarry, Stibbington, 3rd August 1969.

*Cionus alauda (Herbst). This species has been found on Scrophularia nodosa at Raveley Wood 4th May 1972, and Agden Wood, 13th May 1972. It has also been taken on S. aquatica at St. Neots Holt, 15th May 1971, at Hemingford Grey (The Thorpe), 13th June 1971, and by G.S. Tew at Great Staughton (R. Kym), 17th June 1971.

REFERENCES

Buck F.D. (1962) : A provisional list of the Coleoptera in Wood Walton Fen, Proc. S. Lond. ent. nat. Hist. Soc. 1961, 93–117.

Elton C.S. and Miller, R.S. (1954) : The ecological survey of animal communities : with a practical system of classifying habitats by structural characters. J. Ecol. 42, 460–496.

Morris, M.G. (1963) : Notes on Huntingdonshire weevils (Col., Curculionoidea) with special reference to Monks Wood and Woodwalton Fen National Nature Reserves. Ent. Gaz. 14, 129–139.

Morris, M.G. (1965) : Notes on Huntingdonshire weevils (Col., Curculionoidea) in 1963 and 1964 with special reference to the National Nature Reserves. Ent. Gaz. 16, 105–113.

Morris, M.G. (1968) : Recent records of weevils (Col., Curculionoidea) from Huntingdonshire and its National Nature Reserves. Ent. Gaz. 19, 219–222.

Omer–Cooper, J. (1926) in Page, W. and Proby, G. (edit) : Victoria History of the County of Huntingdon 1, 95–117.

Welch, R.C. (1970a) : Recent Coleoptera records for Huntingdonshire. Rep. Huntingdon Fauna Flora Soc. 1969, 20–22.

Welch, R.C. (1970b) : The Coleoptera of Monks Wood National Nature Reserve, Huntingdonshire, Second supplement, 1966–1968. Ent. Gaz. 21, 133–141.

Welch, R.C. (1972) : New records of Coleoptera from Huntingdonshire. Rep. Huntingdon Fauna Flora Soc. 1971, 27–30.

Welch, R.C. (1973) : Coleoptera, in Steele, R.C. and Welch, R.C. (edit.) Monks Wood, a Nature Reserve record 212–233.

LEPIDOPTERA REPORT 1973

J. Heath

Monks Wood Experimental Station

The names of those who have supplied records are:–

J. Clark (J.C.) D.O. Elias (D.O.E.) A.M. Emmet (A.M.E.), J. Heath (J.H.).

1973 was a good butterfly year culminating in the autumn with large numbers of Vanessa atalanta L. (Red Admiral) being present in many parts of the county. In Monks Wood Polygonia c–album L. (Comma) was in good numbers in early autumn, whilst Melanargia galathea L. (Marbled White) was seen on twelve occasions – a considerable improvement on recent years. Strymonidia pruni L. (Black Hairstreak) was in moderate numbers despite the disastrous season it had in 1972. Likewise Strymonidia w–album Knoch (White letter Hairstreak) was in good numbers. Argynnis paphia L. (Silver–washed Fritillary) was sighted once and Erynnis tages L. (Dingy Skipper) twice. (D.O.E.).

Elsewhere Goneptyeryx rhamni L. (Brimstone) was in large numbers in Hinchingbrooke Wood, Brampton Mill and Hartford; Aphantopus hyperantus L. (Ringlet) in large numbers near the southern boundary of Wyton aerodrome and Polyommatus icarus Rott. (Common Blue) on the gravel pits at St. Ives and Buckden. (J.C.).

A preliminary survey of Ladies Wood nature reserve was made in June and July when the following species were recorded (J.H.):–

Ochlodes venata Br. & Grey. Large Skipper.
Pieris brassicae L. Large White
Pieris napi L. Green–veined White.
Maniola jurtina L. Meadow Brown.
Aphantopus hyperantus L. Ringlet.
Epiblema uddmanniana L.
Agapeta hamana L.
Chrysoteuchia culmella L.
Crambus perlella Scop.
Acentria nivea Oliv.
Scoparia ambigualis Treits.
Eurrhypara hortulata L.
Udea olivalis D. & S.
Opisthograptis luteolata L.
Ourapteryx sambucaria L.
Alcis repandata L.
Lomographa temerata D. & S.
Campaea margaritata L.
Pterostoma palpina C1.
Spilosoma lubricipeda L.
Agrotis exclamationis L.
Noctua pronuba L.
Graphiphora augur F.
Naenia typica L.
Mythimna impura Hubn.
Mythimna pallens L.

Hemithea aestivaria Hubn.
Timandra griseata Peter
Idaea aversata L.
Camptogramma bilineata L.
Eulithis pyraliata D. & S.
Cidaria fulvata Forst.
Plemyria rubiginata D. & S.
Perizoma alchemillata L.
Lomaspilis marginata L.
Rusina ferruginea Esp.
Apamea monoglypha Hufn.
Apamea sordens Hufn.
Caradrina clavipalpis Scop.
Diachrysia chrysitis L.
Autographa gamma L.
Laspeyria flexula D. & S.
Polypogon nemoralis F.

Species new to Pingle Wood Cutting (J.H.):–

Eupithecia subfuscata Haw.
Eupithecia simpliciata Haw.
Harpyia furcula Cl.
Brachionycha sphinx Hufn.
Euplexia lucipara L.

During 1973 a survey of the leaf mining lepidoptera especially the Nepticulidae, of Monks Wood was started by Lt. Col. A.M. Emmet. This has resulted in many new county records including the following:–

Nepticula	basiguttella Hein.
N.	luteella Staint.
N.	crataegella Klim.
N.	regiella H.S.
N.	anomalella Goeze.
N.	salicis Staint.
N.	floslactella Haw.
N.	microtheriella Staint.
N.	fragariella Heyd.
N.	lapponica Wocke.
N.	viscerella Staint.
N.	ulmivora Fol.
N.	malella Staint.
N.	trimaculella Haw.
N.	marginicolella Staint.
Ectoedemia	argentipedella Zell.
E.	albifasciella Hein.
E	pulverosella Staint.

HUNTINGDONSHIRE DIPTERA (6)

B.N.K. Davis Monks Wood Experimental Station
&
J.H. Cole Huntingdon Research Centre

SYRPHIDAE (part 1). An initial list of hoverflies for the vice county was published in the 1964 Annual Report of this Society and additions were noted in subsequent reports up to 1968. Enough distributional data have now accumulated to warrant providing an annotated account for this family, the first part of which is produced here.

Of the 55 species described, all but 4 have been taken from Monks Wood or surrounding fields and 9 have only been taken there. This clearly reflects the sampling intensity but is also due to the diversity of habitats provided. A detailed account of the Syrphidae of Monks Wood has been published by Davis (1973). Most of the other locality records have been the result of excursions by this Society.

The nomenclature follows Coe (1953) but the 27 Syrphus species are arranged according to 11 generic groupings proposed by Dusek & Laska (1967) since these are likely to be widely adopted in the future. The earliest and latest seasonal records are given for each species, a hyphen indicating an occurrence in every intervening month. The localities and recorders are arranged chronologically, the recorders being abbreviated as follows:

Mr. J.H. Cole (J.H.C.), Dr. B.N.K. Davis (B.D.), Dr. J.V. Leonard (J.V.L.), Dr. E. Pollard (E.P.), Dr. R.C. Welch (R.C.W.), Mr. H.J. Wills (H.J.W.).

SUBFAMILY SYRPHINAE. The adults visit the flowers of shrubs, herbs and grasses and males of many of the larger species hover in dappled sunlight among trees and in other sheltered places. The larvae of all species, where they are known, feed on aphids, other homoptera and small caterpillars.

Paragus tibialis Fall. Only taken at Yaxley brick pits 10.viii.1968 and Yarwell Quarry 3.viii.1969 (J.H.C.).

Baccha elongata Fab. Seven records from Monks Wood only 17.vii.1966 (H.J.W.). 3.v–9.ix, 1968, 1969, 1970 (EP).

Baccha obscuripennis Meig. Frequent in shady places 5.v.–29.ix Monks Wood (B.D., R.C.W., H.J.W.,E.P.), Brampton Wood (J.H.C.), Easton (B.D.), Grafham Water N.R., Hinchingbrooke Park, and Raveley Wood (J.H.C.).

Pyrophaena granditarsa Forst. Widespread and rather common, favouring damp areas. 11.vi–4.ix mainly viii. Hartham Street (B.D., J.H.C.), Holywell (B.D.), Brampton village and by River Ouse, Brampton Wood, Wood Walton, Grafham Water N.R., Yarwell Quarry, Ramsey Heights clay pits and St. Ives gravel pits (J.H.C.), Monks Wood and Alconbury (E.P.).

Pyrophaena rosarum Fab. In similar situations to the last species but less common. 27.v, 2.vii–14.viii. Monks Wood Wood (H.J.W., E.P.), Brampton Wood and River Ouse, Hartham Street, Shepherds Close, Grafham Water N.R. (J.H.C.).

Platychirus albimanus Fab. Widespread and probaably common. 28.iv–29.ix. Monks Wood (B.D., H.J.W., E.P.), Holywell (B.D.), Brampton River Ouse, Buckworth Wood, Yarwell Quarry (J.H.C.), Alconbury (E.P.).

Platychirus augustatus Zett. Frequent. Most records near water. 30.v–26.vii. Monks Wood (B.D., E.P.), Alconbury, Brampton gravel pits, Yaxley brick pits, Grafham Water N.R., and Little Paxton gravel pits (J.H.C.).

Platychirus clypeatus Meig. Common and widespread in grassy places. 14.v–22.ix. Bevill's Wood, Elton, Woodwalton Fen, Easton, Conington Fen, Monks Wood and fields, Yelling, Hartham Street, Yaxley brick pits etc. (J.H.C., B.D., E.P.).

Platychirus fulviventris Mcqt. An uncommon species in Britain but frequent in marshy areas in Hunts. 14.vi–14.viii. Conington Fen, Offord River Ouse (B.D.), Woodwalton Fen (B.D., J.V.L.), Brampton River Ouse, Marsh Lane gravel pit, Little Paxton gravel pits, Ramsey Heights clay pits and St. Neots Holt (J.H.C.), Monks Wood fields (E.P.).

Platychirus immarginatus Zett. An uncommon species in Britain. Monks Wood 27.vii.1966 (H.J.W.), Holme Fen 14.vi.1969 (J.H.C.).

Platychirus manicatus Meig. Common and widespread. 17.v–18ix mainly vi. and viii. Records from nineteen localities, including Sibson River Nene, Sawtry Roughs, Clopton, Brampton Wood, Woodwalton Fen, Hartham Street, etc. (J.H.C., B.D., E.P.).

Platychirus peltatus Meig. Common but not so widely recorded as the last species. 14.v–2.x mainly vi. and viii. Easton, Bevill's Wood, St. Ives gravel pits and Conington Fen (B.D.), Monks Wood (B.D., H.J.W., E.P.), Brampton Wood, Little Paxton gravel pits (J.H.C.), Alconbury, Woodhurst (E.P.), Woodwalton Fen (J.V.L.).

Platychirus scutatus Meig. Fairly common and widespread. 12.v–23.ix. Easton, Holme Fen, Offord River Ouse, Woodwalton Fen, Spaldwick and Glatton Folly (B.D.), Monks Wood (H.J.W., E.P.), Yelling, Shepherds Close (J.H.C.), Alconbury (E.P.).

Platychirus tarsalis Schum. This early flying and apparently uncommon British species has been taken in large numbers at Monks Wood by E.P. (see 1969 Annual Report). No other localities are yet known, although one of us (J.H.C.), has visited 5 Hunts woods in May during the last 8 years, including 9 visits to Brampton Wood in 5 different years. 10.v–23.vi plus one second brood individual taken 15.vii.1969 (E.P., B.D.,).

Xanthandrus comtus Harris. Taken so far only from Warboys Wood 16.viii.1966 (J.H.C.) and Monks Wood 14.viii–1.ix.1966 (H.J.W.).

Melanostoma ambiguum Fall. This early spring species may also have been overlooked. The only records are from larvae on blackthorn which have been bred out. Monks Wood 27 and 29.iii.1968, Houghton 27.iii.1968 (E.P.).

Melanostoma mellinum L. Common and widespread in grassy areas 12.v, 11.vii–22.ix mainly vii. and viii. Recorded from fourteen localities, including Easton, Conington Fen, Monks Wood, Yelling, Hinchingbrooke Park, Holywell, etc., (J.H.C., B.D., E.P., H.J.W.).

Melanostoma scalare Fab. Widespread and often abundant. Weekly 1.v–2.ix. Many localities, including Offord River Ouse, Monks Wood, Hartham Street, Brampton Wood, Yarwell Quarry, Alconbury, etc. (J.H.C., B.D., E.P., H.J.W.).

Sphaerophoria menthastri L. Local. 31.v–23.ix. Hartham Street (several records) (B.D.), Monks Wood fields (several records) (E.P.. B.D., H.J.W.). var picta Alconbury (J.H.C.).

Sphaerophoria rueppellii Zett. An uncommon British species. Monks Wood fields 14.vi.1965, var nitidicollis Waresley Park (allotments) 29.vii.1971 (B.D.).

Sphaerophoria scripta L. Common and widespread in grassy areas 30.v–4.ix mainly vii and viii. Twelve localities, including St. Ives, Easton, Monks Wood, Conington Fen, Pidley Knot Hole, Little Paxton gravel pits (J.H.C., E.P., B.D., H.J.W.).

Xanthogramma citrofasciatum Deg. Taken only at Brampton River Ouse 28.v.1966 and Yarwell Quarry 3.viii.1969 (J.H.C).

Xanthogramma pedissequum Harris. Uncommon. Woolley (road verge) 14.vii.1964 (B.D.), Monks Wood and fields 15.vii.1964, 3.vii.1968, 5.viii.1970 (B.D., E.P.).

Leucozona lucorum L. Rather widespread but usually in small numbers. This is one of the most easily recognised hoverflies. 9.v–3.viii. Monks Wood and fields (B.D., E.P., H.J.W.), Holme Fen, Woodwalton Fen, Sand Wood (B.D.), Brampton River Ouse (B.D., J.H.C.), Sibson River Nene, Hinchingbrooke Park, Little Paxton gravel pits (J.H.C.), Alconbury (E.P.).

Scaeva pyrastri L. Locally frequent to common in some years. 12.vii–14.ix. Holywell, Hartham Street (B.D.), Monks Wood and fields (B.D., E.P., H.J.W.), Brampton garden, Warboys Wood and Yaxley brick pits (J.H.C.).

Scaeva selenitica Meig. An uncommon species in Britain, it has been taken in Hunts only at Monks Wood 9.viii.1967 (B.D.), 2 and 30.vii.1969 (E.P.).

Syrphus auricollis Meig (Episyrphus). Locally frequent, mainly near woodland. 24.v–4.ix Holme Fen, Easton (B.D.), Monks Wood and fields (B.D., E.P., H.J.W.), Orton Lodge, var. maculicornis at Brampton Wood (J.H.C.).

Syrphus balteatus Deg. (Episyrphus) One of the most abundant and widespread species, especially in August (see Pollard, 1969 Annual Report). end v–23.ix (J.H.C., B.D., E.P., H.J.W.).

Syrphus cinctellus Zett. (Episyrphus). Uncommon. 14.viii–23.ix Monks Wood (B.D., H.J.W., E.P.). Hartham Street (B.D.).

Syrphus albostriatus Fall. (Dasysyrphus). Local 11.v–vi, 2.viii–3.ix Monks Wood (B.D., H.J.W., J.H.C., E.P.), Grafham Water N.R. (B.D.), Holme Fen (B.D.).

Syrphus lunulatus Meig. (Dasysyrphus). Two females taken so far only from Monks Wood 11.vi.1964 (B.D.) and Woodwalton Fen 25.vi.1969 (J.V.L.).

Syrphus tricinctus Fall. (Dasysyrphus). Uncommon and not recorded since 1966. Holme Fen 8–11.vi, 1964, 1965 (B.D.) Monks Wood 14–25.vi, 6–14.viii 1964, 1965, 1966 (B.D., H.J.W), Brampton Wood 20.viii.1966 (J.H.C.).

Syrphus venustus Meig. (Dasysyrphus). Uncommon. Monks Wood and fields 28.v–25.vi. 1964, 1965, 1969 (B.D., E.P.), Easton 30.v.1964 (B.D.), Brampton River Ouse 15.v.1966 (J.H.C.).

Syrphus corollae Fab. (Metasyrphus). A very common and widespread species of fields and hedgerows especially during August. 30.iv.–1.ix (B.D., E.P., J.H.C., H.J.W.).

Syrphus latifasciatus Mcqt. (Metasyrphus). Uncommon. Easton 22.viii.1964 (B.D.), Monks Wood and fields 11.v, 5.vii–9.ix.1964–1967 (B.D., E.P., H.J.W.), Brampton River Ouse 28.v.1966 (J.H.C.).

Syrphus luniger Meig. (Metasyrphus). Widespread but never common. 14.vi–30.viii. Woodwalton Fen, Holme Fen, Offord Cluny River Ouse and Conington Fen (B.D.), Monks Wood (B.D., H.J.W., E.P.), Alconbury (J.H.C., E.P.).

Syrphus laternarius Mueller (Ischyrosyrphus). A conspicuous species but recorded only in and near Monks Wood. Bevill's Wood 29.vi.1965 (B.D.), Monks Wood vi.–vii, 1966, 1969, 1970 five specimens (B.D., E.P.).

Syrphus ribesii L. (Syrphus). Abundant and widespread in all types of habitats 15.v–14.ix (B.D., J.H.C., H.J.W., E.P., J.V.L.).

Syrphus torvus Ost.Sack. (Syrphus). Much less common than the last species but possibly overlooked owing to its similarity with it. Monks Wood vi–27.viii, 1966, 1967, 1969 (J.H.W., B.D., E.P.), Alconbury 15.ix.1970 (E.P.).

Syrphus vitripennis Meig. (Syrphus). Although this species and S. ribesii were taken in roughly equal numbers in Monks Wood in 1969 and 1970 by E.P., it has not been nearly so widely recorded. 29.vi–17.ix, peak in viii. Monks Wood and fields (B.D., E.P., H.J.W.), Easton (B.D.), Wood Walton (B.D.).

Syrphus diaphanus Zett. (Epistrophe). Six specimens of this generally uncommon species taken in or near woodland. Bevill's Wood 3.vii.1964 (B.D.), Monks Wood 5 and 6.vii.1967, 16.vii.1969 (B.D., E.P.), Hartham Street and Shepherds Close 20.vii.1968 (J.H.C.).

Syrphus eligans Harris (Epistrophe). Widespread but not numerous. Most often taken in May. 8.v–6.vii. St. Ives gravel pits, Hartham Street, Holme Fen road verge (B.D.), Monks Wood (B.D., E.P.), Brampton Wood, Warboys Wood (J.H.C.).

Syrphus grossulariae Meig. (Epistrophe). Three specimens taken at Monks Wood. 30.vi.1964 (B.D.)., 16.vii.1966 (H.J.W.), 23.vii.1969 (E.P.).

Syrphus euchromus Kowarz. (Epistrophella). Monks Wood, one record. 26.iv.1968 (E.P.). An uncommon species in Britain, but very early and perhaps overlooked.

Syrphus cinctus Fall. (Fagisyrphus). Monks Wood, two records. 2.viii.1966 (H.J.W.), 15.vi.1967 (B.D.).

Syrphus guttatus Fall. (Meligramma). One record of this uncommon species from Monks Wood 30.vi.1964 (B.D.).

Syrphus triangulifer Zett. (Meligramma). One adult emerged on 30.iii.1968 from a larva collected from blackthorn at Monks Wood by E.P. A generally uncommon species.

Syrphus annulatus Zett. (Mesosyrphus). One specimen taken from Grafham Water N.R. 25.v.1970 (J.H.C.).

Syrphus punctulatus Verr. (Mesosyrphus). Monks Wood, one record 6.v.1970 (E.P.).

Syrphus vittiger Zett. (Mesosyrphus). Holme Fen, one record 11.vi.1965 (B.D.).

Syrphus compositarum Verr. (Melangyna). No records of this generally northern species. The record given in the H.F.F.S. Report for 1965 (No.18) was based on a misidentification.

Syrphus labiatarum Verr. (Melangyna). A common and widespread species, often on roadside umbellifers. 27.v.–16.viii. Bevill's Wood road verge, Brampton Wood road verge, Brampton River Ouse, Hartham Street, Alconbury, Holme Fen, etc. (B.D., J.H.C., E.P.).

Syrphus lasiophthalmus Zett. (Melangyna). Another very early species so far taken only from Monks Wood. 30.iv.1969, 14.iv.1970 (E.P.), 17.iv.1972 5 males in suction traps operated by M.W. Service.

Syrphus umbellatarum Fab. (Melangyna). Not common but quite widespread 8.vi.–26.viii Holme Fen, Easton (B.D.), Monks Wood (B.D., H.J.W.), Warboys Wood (J.H.C.).

SUBFAMILY CHRYSOTOXINAE A small subfamily combined with the Syrphinae by Duzek & Laska (1967). Rather large and distinctive flies of the Syrphus type with elongate antennae.

Chrysotoxum bicinctum L. Fairly widespread but not common. Most of the records were in 1968. 12.vi.–10.viii. Monks Wood (H.J.W., B.D., E.P.), Houghton (E.P.), Shepherds Close (J.H.C., B.D.), Yaxley brick pits (B.D.).

Chrysotoxum cautum. Frequent and widespread in various habitats. 20.v–25.vi. Monks Wood, Spaldwick, Eynesbury, Brampton Wood road verge, Wyton road verge, Hartham Street, Little Paxton gravel pits, Elton Furze and Lady's Wood (B.D., J.H.C.).

Chrysotoxum verralli Collin. One record from Brampton gravel pits 30.viii.1965 (J.H.C.).

REFERENCES

Coe, R.L. (1953) Syrphidae. Handbk Ident. Br. Insects X (1). Roy. ent. Soc. Lond.

Davis, B.N.K. (1973) Syrphidae. In: Monks Wood. A nature reserve record. ed. R.C. Steele & R.C. Welch, pp 169–176.

Dusek, J. & Laska. P. (1967). Versuch zum Aufbau eines naturlichen Systems mitteleuropaischer Arten der Unterfamilie Syrphinae (Diptera). Acta. sc. nat. Brno. 1, 349–90.

THE PAST AND PRESENT STATUS OF THE FROG RANA TEMPORARIA AND THE TOAD BUFO BUFO IN HUNTINGDONSHIRE

A.S. Cooke and P.F. Ferguson

Monks Wood Experimental Station

INTRODUCTION

Recently the common frog Rana temporaria and the common toad Bufo bufo have decreased over much of Britain mainly, it is believed, because of loss or modification of ponds, ditches and other wet areas essential for these amphibians (Cooke, 1972a). Both species are now generally regarded as being rare in Huntingdonshire, although one has only to talk to a few retired farm workers to realise that before the Second World War frogs and toads were very common. This article describes an investigation to determine (1) their present distribution and abundance in the county and (2) when, why and to what extent populations declined.

The county boundary used was the administrative boundary of Huntingdonshire prior to amalgamation with the Soke of Peterborough in 1968. During the last four years, but particularly in 1973, virtually every village, town and fenland area in the county has been visited in order to look for amphibia and to obtain information from local inhabitants. This is the first time that a county on the British mainland has been thoroughly and uniformly searched. Previously, county or national distribution maps for the commoner amphibians have usually done no more than reflect the distribution of observers. In the 1960's the Isle of Wight was thoroughly searched for breeding frogs and toads and their distribution was plotted as presence or absence on a 1Km square basis (see Frazer, 1968). We have taken this one step further by attempting to estimate the current number of adults in each breeding colony and so derive the county population. This has been facilitated by Huntingdonshire being one of the smallest counties in Britain and having a relatively low density of frogs and toads. Similar surveys in other counties are likely to be considerably more difficult and time consuming.

PRESENT DISTRIBUTION AND ABUNDANCE

Distribution maps for the frog and for the toad for the period 1970–1973 are shown in Figures 1 and 2 respectively. The key is given in the legend of each Figure. Symbols represent sightings or breeding records during at least one of the four years. The maps do not show introductions unless the animals survived at least one winter. Neither do they include reports of tadpoles or adults referred to as 'frogs or toads'. Most of the important breeding sites, especially for the frog, occur in the valley of the Great Ouse.

For each breeding site in 1973, estimates were made of the total numbers of frogs and toads. At best an estimate was based on spawn clump counts (for the frog), but sometimes it was a guess relying on sketchy reports of relative abundance of amphibians in the area combined with a knowledge of typical colony sizes in different types of site. The aggregates for the sites indicate the county breeding populations in 1973 to be: frog, 1500 adults; toad, 4000 adults. If our estimates were consistently low, then the county totals could be as high as 3000 frogs and 8000 toads; and if the estimates were generally too high, populations might possibly be as low as 700 frogs and 2000 toads.

It should be stressed that these figures apply to 1973. County totals of active breeding adults can fluctuate considerably from year to year mainly because of changes within, or complete loss of, large colonies. For instance, maximum counts of gatherings of male toads on St. Neots Common during the last three breeding seasons have been: 1971, c.500; 1972, c.1000; 1973, c.160; while the number of breeding frogs in the colony at the Old Rectory in Wyton has apparently declined from hundreds in 1970 to none in 1973.

As can be seen in Figure 1, the frog has benefited from recent introductions. One of us (A.S.C.) has been directly or indirectly responsible for most of these introductions. With the help of members of Monks Wood Experimental Station, tadpoles or newly–metamorphosed juveniles have been released in 11 different areas in the county. Frogs have apparently survived in at least seven places and have so far bred in two (they do not usually breed until they are three years old). It must be emphasised, however, that before attempting introductions, one must know something about the animals' requirements. The random scattering of spawn, tadpoles or adults into water bodies of any type is more likely to wipe out existing colonies than lead to an increase in the total population. So far we have introduced toads into five areas without any being seen in subsequent years. The reason for this apparent lack of success remains unresolved, but it is possible that the juveniles dispersed out of the areas searched.

STATUS SINCE THE 1930's

Information on changes in status since the 1930s was mainly obtained from long–term residents of the county. We acknowledge that few of our informants could be regarded as expert naturalists, and that they bound to have made some mistakes when trying to remember dates or when distinguishing between frogs and toads. There is, however, no alternative method for determining changes in status for several decades into the past. These people almost invariably showed keen interest and concern for their local wildlife and we submit that their opinions may be used but with caution. Information for the frog is given in Table 1 for nearly all of the villages, towns and areas of fen in the county; and is summarised in Table 2. A statement from any one individual could have been quite inaccurate, so it would be unwise to accept uncritically the changes shown for a single village. Any comments on the material set out in Table 1 or on changes in any other areas in the county would be most welcome. Because of the nature of the information, as more people were interviewed so the overall picture became more reliable and the summary for the county (Table 2) is probably a

reasonably accurate assessment of what happened. In the 1930's the frog appears to have been common in most areas, but decreases in the 1940's, 1950's and 1960's reduced it to a contemporary status of rare or absent over virtually all of the county. It is interesting to note the consistent decrease in reports of 'common' through the decades, accompanied by an increase in the 'absent or rare' reports (Table 2). This demonstrates a broad general agreement between the opinions of local inhabitants from all over the county and adds further credibility to the information. Most informants were of the opinion that toads showed similar changes in status to frogs, so a separate Table for the toad is not included.

Some of the people interviewed suggested reasons for the decline of the frog:

(i) the widespread use of agricultural chemicals (suggested by 26 individuals or groups);

(ii) loss of ponds or ditches (18);

(iii) modification of ponds or ditches, e.g. improved drainage (11);

(iv) loss of damp pasture (2);

(v) increase in populations of ducks, a potential predator (1);

(vi) increase in motor traffic (1).

DISCUSSION

There can surely be few people who would disagree that the frog and the toad have decreased in numbers in Huntingdonshire over the last few decades, but to what extent and why have these amphibians declined?

Working in Hertfordshire, Savage (1961) estimated the average density of adult frogs to be 3 or 4/acre in a study area of one square mile during the 19300's and 5 or 6/acre in a similar area in 1949. He regarded 5 frogs/acre as a fair average for Britain. At this density the total number of adult frogs in Huntingdonshire would have been 1.2 million indicating that the population was then nearly a thousand times greater than at present. It is, however, hard to believe that frogs could have been this common in Huntingdonshire. If in the 1930's in each parish there were on average ten frog colonies each containing an average of 100 adults, then the county population would have been nearly 100,000. Bearing in mind the descriptions of the 1930's given by the informants, this figure seems a reasonable rough approximation and suggests that frogs may have decreased by a factor of about 50 or 100 times over the last 40 years.

Breeding colonies of toads are more easily overlooked than frog colonies because their strings of spawn are less obvious than clumps of frog spawn. Consequently toads tend to be less well known and it is even more difficult to determine how many adult toads were present in the county before the Second World War. Several tens of thousands or perhaps even hundreds of thousands seems likely. It is interesting to note than in 1973 toads were believed to be numerically superior to frogs by a ratio of more than 2 : 1. This differs from the situation in the Isle of Wight (Frazer, 1968) and in Leicestershire (Bell, 1970), where surveys have revealed the frog to be more common.

There were two striking differences between the findings of the national survey (Cooke, 1972a) and this survey for Huntingdonshire. First, whereas declines of frog and toad populations only reached serious proportions on a national scale in the 1960's noticeable declines occurred in many parts of Huntingdonshire as early as the 1940's. Secondly, many local inhabitants of Huntingdonshire blamed agricultural chemicals, while, nationally, pesticides and fertilisers were rarely mentioned. In 1973 we investigated the decrease of frogs and toads on farmland in four 10 Km squares on the Fens (TL 38, 39, 48 and 49). A small part of this area is in Huntingdonshire, most being in Cambridgeshire. The fenland farmers described decreases in the 1940's, 1950's and 1960's, and of those who thought they had some idea why frogs had declined, 78% blamed agricultural chemicals.

Thus it seems that a 'special local factor' was responsible for the earlier declines noted in Huntingdonshire and the Fens, but was this factor really pesticide usage? The reasons for believing that pesticides have not been mainly responsible for the widespread national declines are as follows:

(i) 'background' pesticide levels in the environment have not been high enough to be harmful (Cooke, 1972a);

(ii) only one incident involving a pesticide and frogs has ever been reported (Hazelwood, 1970), yet poisoned frogs could be very conspicuous (Cooke, in press);

(iii) samples of amphibian tissues have not been found to contain dangerous pesticide levels (Cooke, in press);

(iv) the toad is more resistant to insecticides than the frog, but has undergone similar population declines (Cooke, 1972 a, b).

There is no factual evidence to implicate pesticides in the decline of the frog in Huntingdonshire. Indeed some of the early decreases in the county and particularly on the Fens occurred before the widespread introduction of synthetic insecticides (generally the most dangerous pesticides to wildlife) and were probably due to loss of breeding ponds and drainage improvements. We believe that the frog has suffered chiefly from the marked changes in the landscape since the agricultural recession of the 1930's. The 'special local factor' is probably the exaggerated effect of changes in agricultural land use in this intensively–farmed county. Ponds have been filled in, the Kimbolton area for instance having lost 35% of its ponds in the last two decades (Relton, 1972). Some ditches have become overgrown from lack of management, while most of the remainder are now steep–sided, are frequently cleaned out and no longer have permanent water throughout the summer. Frogs cannot breed successfully here. Neither can they use the field ponds, once surrounded by lush pasture, but now left to decay in the middle of an arable field. The Agricultural Statistics Reports issued annually by the Ministry of Agriculture, Fisheries and Food reveal that the switch from pasture to arable has been most marked in the War years of the early 1940's, and also in the period since 1960.

In addition of course there has been direct pressure from humans. The population of the county increased from 56,000 in 1931 to 80,000 in 1961. Land has been required for housing, schools, factories and roads. In 1973, Huntingdon's new By–Pass claimed the town's last important frog breeding site. An increase in the human population means more children to collect or kill the spawn, tadpoles and adults and more motor cars to crush the migrating frogs and toads. When a busy road runs between a hibernation site and a breeding site, one third of the adult frogs or toads can be killed on each crossing. In 1959 and 1960 on a two mile stretch of the A 6003 in neighbouring Northamptonshire, a total of 409 dead frogs was counted (Hodson, 1966) – more than a quarter of the current estimated population in the whole of Huntingdonshire.

These changes which have been virtually concommittant with pesticide usage (so making an assessment of the relative effects of each factor even more difficult) offer readily–observable reasons why frogs are now so rare. There are, however, many ponds that remain apparently unchanged, yet no longer hold thriving frog populations. The leading British authority on the ecology of the frog, R.M. Savage, regards such situations in his old study area in Hertfordshire mainly as a consequence of increased motor traffic (personal communication), but in Huntingdonshire there is a greater likelihood of sites having been polluted with pesticides. While accidental or deliberate direct treatment of breeding sites with organochlorine insecticides could have caused harmful effects on frogs in many localities in Britain (Cooke, 1972a, 1973), such local incidents in Huntingdonshire in the 1950's and 1960's were probably not sufficiently numerous and widespread to have produced the large scale decline observed in the frog population. Nevertheless, pesticide pollution could have been one of the contributing factors in the decline in this area.

Ironically, man who unwittingly almost wiped out the frog in the county is now helping to save the species by creating garden ponds. Five of the seven successful frog introductions, referred to above were in gardens. The frog is rapidly becoming a suburban, rather than a rural, animal.

SUMMARY

The present distribution and abundance of the frog and the toad in Huntingdonshire were determined. In 1973 the estimated numbers of breeding adults were: frog, 1500; toad, 4000. The current total frog population probably represents only about 1 or 2% of the population that existed in the 1930's. Information obtained from local inhabitants indicated that populations of frogs and toads declined considerably in the 1940's, 1950's and 1960's. Since 1970, introductions have led to frogs becoming (re–)established in several places and this has offset losses that have occurred amongst some of the remaining traditional colonies. On agricultural land, population decreases were probably largely due to loss or modification of ponds and ditches. Pesticides, an unimportant factor on a national scale, may have contributed to the decreases in the 1950's and 1960's. In the towns and villages, habitat loss, death of adult amphibians on roads and collection by schoolchildren have probably been responsible for most of the observed declines.

REFERENCES

BELL, G.A.C. (1970). The distribution of amphibians in Leicestershire. Trans Leicester lit. phil. Soc. 64: 122–142.

COOKE, A.S. (1972a). Indications of recent changes in status in the British Isles of the frog (Rana temporaria) and the toad (Bufo bufo). J. Zool. 167: 161–178.

COOKE, A.S. (1972b). The effects of DDT, dieldrin and 2,4–D on amphibian spawn and tadpoles. Environ. Pollut. 3: 51–68.

COOKE, A.S. (1973). The effects of DDT, when used as a mosquito larvicide, on tadpoles of the frog Rana temporaria. Environ. Pollut. 5: 259–273.

COOKE, A.S. (in press). The effects of pp'–DDT on adult frogs (Rana temporaria). Br. J. Herpet.

FRAZER, O.H. (1968). Third survey of the frog and toad spawning areas. Proc. Isle of Wight nat. Hist. archaeol Soc. 6: 189–194.

HAZELWOOD, E. (1970). Frog pond contaminated. Br. J. Herpet. 4: 177–185.

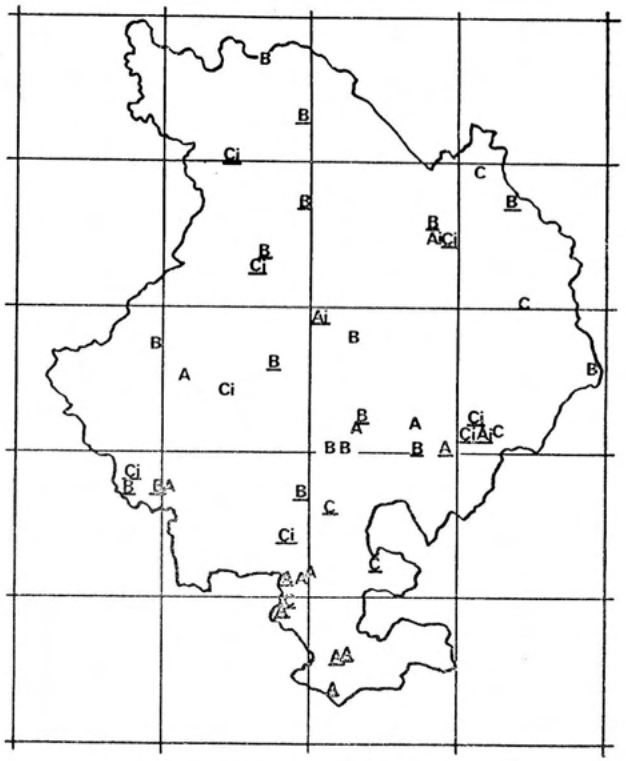
HODSON, N.L. (1966). A survey of road mortality in mammals (and including data for the grass snake and common frog). J. Zool. 148: 576–579.

RELTON, J. (1972). Disappearance of farm ponds. Report, Monks Wood Experimental Station, 1969–1971: 32.

SAVAGE, R.M. (1961). The Ecology and Life History of the Common Frog. London: Pitman.

FIGURE 1

The distribution of the frog Rana temporaria in Huntingdonshire 1970–1973



A = breeding

B = (1) reported breeding, but not verified or (2) adults reported over several years without breeding having been observed.

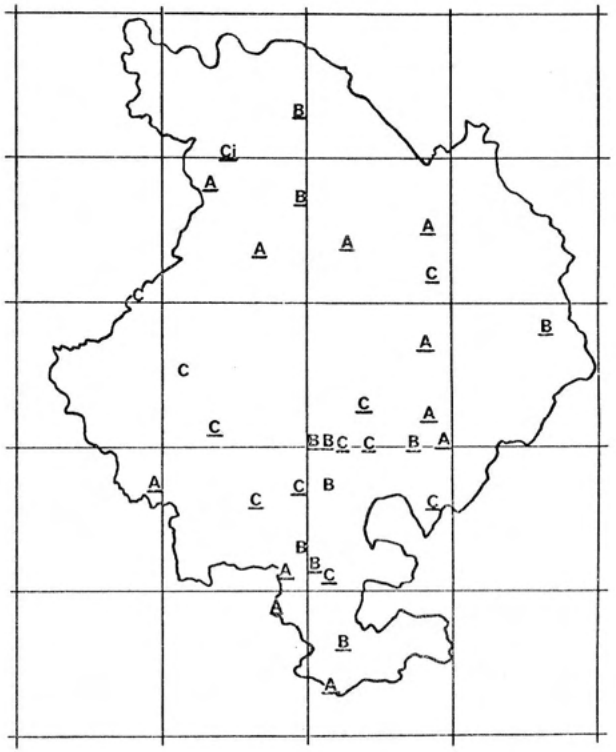
C = (1) isolated records of adults or juveniles or (2) established introduced colony at juvenile state.

i = introduced (or assumed to have been introduced).

Underlining indicates symbols referring to 1973. Thus Ai indicates an introduced colony that bred in 1973 (and perhaps before as well).

FIGURE 2

The distribution of the toad Bufo bufo in Huntingdonshire, 1970–1973.



A = breeding

B = (1) reported breeding, but not verified or (2) adults reported over several years without breeding having been observed.

C = (1) isolated records of adults or juveniles or (2) established introduced colony at juvenile state.

i = introduced (or assumed to have been introduced).

Underlining indicates symbols referring to 1973. Thus Ai indicates an introduced colony that bred in 1973 (and perhaps before as well).

TABLE 1

The status of the frog Rana temporaria in Huntingdonshire since 1930

	No. of informants	Status in decade 1930's	1940's	1950's	1960's	1970's
Abbotsley	2	–	–	–	C	C
Abbots Ripton	4	C	D	A/R	R	A/R
Alconbury Weston	5	C	C	D	D	R
Bluntisham	1	A	A	A	A	A
Brampton	7	C	C	D	D	R
Brington	2	–	–	D	A	A
Buckden	6	Dc	Dc	D	R	R
Buckworth	1	A/R	A/R	A/R	A/R	A/R
Catworth	2	–	C	D	A	A
Conington	1	C	C	C	D	A
Earith	3	C	C	C	D	R
Easton	1	–	–	–	A	A
Ellington	2	R	R	R	D	A
Elton	4	C	C	D	A	A
Farcet	1	–	–	A/R	A/R	A/R
Gaunt Fen	2	R	D	A	A	A
Glatton	2	C	D	A	A	A
Godmanchester	3	C	C	D	D	A/R
Grafham	1	C	C	C	D	A
Great Gidding	4	C	C	D	D	A
Great Gransden	1	C	C	D	D	A
Great Paxton	3	–	–	–	A	A
Great Raveley	1	–	A	A	A	A
Great Staughton	1	C	C	D	A	A
Hail Weston	1	C	–	–	–	A/R
Hamerton	1	–	C	D	R	R
Hartford	2	–	–	–	A/R	A
Hemingford Abbots	6	C	D	R	'R	R
Hemingford Grey	5	C	Dc	Dc	Dc	D
Holme	2	–	–	–	A/R	R
Huntingdon	9	D	R	R	D	D
Kimbolton	6	C	C	D	D	R
Leighton Bromswold	2	C	–	D	R	R
Monks Wood	2	–	–	D	D	I

Morborne	1	–	–	–	A	A
Needingworth	1	A	A	A	A	A
Offord Cluny	2	C	C	D	A/R	R
Offord D'Arcy	1	C	–	D	A	A
Old Weston	3	–	–	C	D	R
Pidley	1	C	C	D	A	A
Pidley Fen	4	C*	C*	D	D	A/R
Ramsey	4	–	C	D	A/R	R
Ramsey Heights	1	–	C	D	A/R	A
Ramsey Hollow	2	C	D	A/R	A/R	R
Ramsey Mere	2	C	D	A/R	A/R	A/R
Ramsey St. Marys	2	C	C	D	A	A
St. Ives	3	–	–	–	D	I/
St. Neots	2	–	–	C	C	C
Somersham	1	C	C	C	D	A
Southoe	2	–	A	A	A	I/
Spaldwick	1	R	D	A	A	A
Stilton	3	C	D	D	D	A
Stow Longa	3	C	D	D	A	A
Tetworth Hall	1	–	C	C	C	I
Turf Fen	2	C	C	D	D	A
Upton	1	–	–	R	D	A
Upwood	2	C	C	C	D	A
Warboys	3	C	D	D	A	A
Wistow	1	C	C	D	A	A
Woodhurst	1	A	A	A	A	A
Woodwalton	2	A/R	A/R	R	D	A
Woodwalton Fen N.N.R.	1	C	D	A	A	A
Wyton	3	C	C	C	Dc	D
Yaxley	1	C	C	D	R	R
Yelling	2	C	D	D	A	A

C	=	Common (and no change),	C*	=	Common in parts
I	=	Increasing,	I/	=	Increasing due to introductions
D	=	Decreasing,	Dc	=	Decreasing but still common
A	=	Absent,	A/R	=	Absent or Rare
–	=	No information	R	=	Rare

TABLE 2

The status of the frog Rana temporaria in Huntingdonshire since 1930. A summary of the material presented in Table 1. Figures in brackets are percentages of the total number of status categories (excluding 'no information').

Status of the frog	No. of villages, towns and fen areas				
	1930's	1940's	1950's	1960's	1970's
Common	35 (78)	26 (53)	9 (16)	3 (5)	2 (3)
Increasing	0 (0)	0 (0)	0 (0)	0 (0)	4 (6)
Decreasing	2 (4)	14 (29)	29 (51)	23 (36)	3 (5)
Absent or Rare	8 (18)	9 (18)	19 (33)	38 (59)	56 (86)
No information	20	16	8	1	0
Total	65	65	65	65	65

*AMPHIBIANS AND REPTILES:

J.S. Clark (Editor)

Hinchingbrooke School

After a run of warm dry summers conditions have favoured reptiles resulting in unprecedented numbers of grass snakes. Amphibians have suffered to some extent since many of their breeding sites were dry in the spring.

*From the Hinchingbrooke Natural History Society 1973 Report, by courtesy of Mr. Clark.

ADDER

A pretty reliable report of one at Godmanchester (DY). The observer, who is very familiar with the grass snake, emphasized the greater girth of the body compared with that species and the "arrow–shaped" markings running the entire length of the body. Apparently one was reported on a neighbouring farm in 1972.

GRASS SNAKE

Quite exceptional numbers reported. At Hinchingbrooke alone it bred in four widely separated localities: near the tennis courts (m.o.); on the far side of Nuns Bridge (m.o.); in the fir plantation (G.S. S.O.) and in the Lower School spinney (T.R.). First record was of a dead individual on 19th March (G.S.W.); the last report was of a young one, barely five inches long, found in Lower School during October (V.L.). Grass snakes were also recorded from the following localities: Southoe (D.F.), Buckden (D.E.), Stow Longa (D.R.), Catworth (C.W., S.M.), Bythorn (D.T.), St. Ives (D.V.), Sawtry (J.F.), Abbots Ripton (R.A.S., M.D.), Hartford (R.A.S.), Wennington (T.B.), Easton (S.N.), Port Holme (D.C.), Holme (A.W.), Godmanchester (D.Y.) and Sapley (A.C.). Up to 4 seen swimming together at Brampton Race Course including one almost black individual (C.P., N.E.). In Brampton village some were watched trying to catch frogs whilst others were recorded at Brampton pits (R.H.) and Brampton Wood (L.H.). Also reported at Houghton (T.T.).

SLOW WORM

An example of this legless lizard was identified at Hartford (K.G.). The observer has seen and handled this species in the West Country and knows it well. At around a foot in length it was quite a large specimen. Colour described as light brown with a dark median line.

COMMON LIZARD

Several reported in the Kings Ripton and Abbots Ripton area (M.D.). A few at Meadow Lane Pits, St. Ives (D.V.) and an unconfirmed record from Buckden Pits (per J.M.). Also recorded at Holme during 1972 (A.W.) but the Sapley roadside site has now been filled in (D.A.C.).

CRESTED NEWT

Found at Brampton Hut pond (D.D., K.L.); Upwood (G.S.) and Godmanchester (N.O.).

SMOOTH NEWT

Widespread. Records from Hilton(J.C.) Connington (G.S.), Godmanchester (N.O.), Huntingdon (J.C.), Brampton Hut pond (K.L., D.D.) and Brampton village (R.S.). A young one was seen well away from water at Hinchingbrooke during October (S.S.).

Toad and common frog records from this report have been incorporated by Dr. Cooke in the next article (Editor).

A full list of observers is given at the end of the Mammal Report (p).

*MAMMAL REPORT

J.S. Clark (Editor)

Hinchingbrooke School

HEDGEHOG

First report was of a dead one on the A.14 near Hilton during the mild spell at the end of January (J.C.). However, a more general emergence from hibernation was recorded during March with another dead individual on the A.14 on 8th and 3 individuals huddled together in a garden at Sapley on the 14th (A.C.). Pairs with young were recorded at a number of localities including Oxmoor (D.A.C.), Hartford (S.C.), Brampton (G.C.) and Hilton (J.C.). Last seen in some numbers during a mild spell at the beginning of November, for example at Easton (A.B.).

MOLE

Plentiful around Hinchingbrooke especially in the coniferous plantation by the side of the Lower School spinney (T.R.). On the grounds bordering the new Police Headquarters at least 8 moles were seen above ground during August (W.B.). Most were in the process of making shallow burrows, probably because of the hardness of the ground. Even when burrowing moles are particularly agile and most eluded capture except for one which lived up to the reputation of the species by biting a neat hole in the observer's shirt! Yet another example of the agility of this species was noted by the Ouse where a shallow burrow opened out into an open furrow to avoid an underground obstruction. Although the observer saw the mole emerge it had crossed the open furrow and re–entered the burrow before he had time to get up (D.A.C.).

*From the Hinchingbrooke Natural History Society 1973 Report by courtesy of Mr. Clark

The only other high level of activity was recorded in the north of the county at Norman Cross where a field was said to be riddled with moles (F.B.). One caught by a cat at Brampton was later released unhurt (L.R.).

COMMON SHREW

Represented 23% of barn owl prey items at Ellington, a typical figure for arable areas, whereas it represented only 11% at Easton. No significance can be attached to this as only 64 pellets were obtained from Easton. Scattered reports of dead individuals were also received from a variety of habitats.

PYGMY SHREW

Ratio of Pygmy to Common from owl pellet analysis was 1 : 15 at Ellington, 1 : 5 at Easton. The true figure probably lies somewhere between the two. Found dead at Brampton, Holme (G.V.) and St. Ives G.P. (B.M.L.).

WATER SHREW

Only reports received were of dead individuals picked up over the past few years at St. Ives G.P.(B.M.L.).

BATS

No records were received this year of the Noctule but this species is easily overlooked as it usually flies quite high up. The third roost of the Long–eared Bat to be discovered by the Society was just over the county boundary at Papworth St. Agnes church (N.O., K.C.). The Pipistrelle is as common as ever. This species was watched hunting in broad daylight at Hinchingbrooke (J.C.) and Brampton (K.L.) during mild spells at the end of November 1972, a habit that commonly occurs at this time of year according to the Norfolk report. Early 1973 records include one at Catworth churchyard during the first week of February (S.M.) but most did not emerge from hibernation until the last week of March (N.O. et al.).

A Pipistrelle with a torn wing membrane which prevented it from flying was fed on fruit flies until the wing mended. It had become fairly tame by the time it was released (T.J.). A road casualty was found just outside the school entrance (W.B.). Reports by fishermen of bats flying very low over water had suggested Daubenton's Bat but recent work in Norfolk involving the netting of many bats flying over water had shown that the majority were Pipistrelles – a rather suprising discovery.

RABBIT

Until myxomatosis hit the Hinchingbrooke area in early August this species was enjoying one of its most successful years. Up to 50 were counted in one field alone in the spring and the total number in Hinchingbrooke Park must have run into many hundreds. Enormous numbers were also reported in the warren in the railway embankment at Port Holme. Perhaps the pressure of overcrowding accounted for one rabbit being found in the dense growth surrounding a tree trunk, at a height of eight feet from the ground'. (K.M.L.).

Black (melanistic) rabbits were reported from warrens at St. Ives (B.M.L.), Fenstanton GP (J.C.), Fenstanton village (P.F.), Buckworth (A.E.) and Ellington (E.B.). This is the second year running that the myxoma virus has appeared in August – September. The virus is nearly always carried by the rabbit flea in this country and one can only speculate why it hits us so regularly at this time. Perhaps it coincides with the spread of the younger (less resistant) rabbits or perhaps the flea population reaches a peak in late summer. Once it is established it is easy to see how it can spread from warren to warren. For example, diseased rabbits have been seen to blindly plunge into streams and swim across (T.R.).

HARE

A number of pairs around Hinchingbrooke, the leverets of one pair being found in a form near the underpass. They allowed very close examination – they simply freeze when endangered relying on camouflage. "Boxing" between male hares was noted in early April (D.P.).

RED SQUIRREL

Of the 1972 records only the Brampton and Huntingdon examples stood up to further examination. Moreover no acceptable explanation was forthcoming from specialists who could only suggest the Thetford area as their origin. John Goldsmith, editor of the Norfolk Mammal Report provided maps showing that red squirrels existed in the early sixties somewhere near Higham Ferrars but this colony had become extinct when a further survey was undertaken in 1971. The most likely explanation came from Colonel Leigh of Brampton Mill. For a number of years a pair of red squirrels had bred on his small island reserve until around 1970 when one of the pair was killed on the main road and the other disappeared. Grey squirrels moved in to replace them the very next year. He suggested that the 1972 records from Brampton and Huntingdon refer to the survivor or descendents of this pair. Apparently, not so very long ago, red squirrels were very numerous at Hinchingbrooke (C.L.).

There were no confirmed records for 1973, only a possible seen at Hartford (K.G.). Even in Norfolk, which used to be a real red squirrel stronghold, the grey is making marked penetrations. Even more worrying is a virus disease which seems to have killed off many reds, as there is some evidence linking the spread of this virus with the spread of grey squirrels. Research is being done to see whether the grey is acting as a carrier for the disease (Norfolk Mammal Report).

GREY SQUIRREL

Many records from the usual areas including three killed by cars whilst crossing the St. Ives – Houghton Road (B.M.L.) and two killed on the A.14 near Hilton (J.C.). One at Hinchingbrooke was seen to jump vertically reaching a branch 3 feet from the ground to which it clung upside down (M.T.). Another individual was chased up a tree by a cat then ran half–way down again making threatening noises (M.B.). Usual colour variations noted: one with a red head, another with a reddish tail (D.C., P.T.M.). One kept for over a year as a pet showed so much red that the owner thought it to be a grey x red hybrid (N.S.).

BANK VOLE

The only records were from owl pellets representing 8.5% of prey at Easton and 6.5% at Ellington.

FIELD VOLE

Many sight records (m.o.). Large numbers in owl pellets from Easton and Ellington.

WATER VOLE

Very numerous judging by the reports sent in by fishermen. Files of crushed swan mussels found along Alconbury brook at Brampton Mill are probably the work of this species.

HARVEST MOUSE

Small numbers in owl pellets from Easton and Ellington. Observers are asked to look out for the nests of this species – simply small balls of grass woven on to corn stalks. Mechanical harvesting has, of course, reduced the incidence of observations compared with the days of hand reaping.

HOUSE MOUSE

Infestation on a small scale in some houses at Spaldwick, one rather enterprising pair taking up residence in a sliced loaf. The removal of the first slice was followed by the hasty departure of the occupants.' (C.P.). As usual only small numbers in barn owl pellets.

WOOD MOUSE

A frequent visitor to houses especially around harvesting time. In some houses the numbers are very large necessitating rigorous control measures – many even ending up in the loft (M.H.). One at Spaldwick was given a lively reception by a dog, eventually seeking refuge up the chimney.' (G.P.). Represented 24% of the items in barn owl prey at Easton, a very high figure considering that barn owls hunt mainly in open countryside and not woods. This clearly indicates just how common this species is.'

BROWN RAT

Many reports of very large individuals for example near Huntingdon (D.D.). One crossing the road at Hilton was mistaken for a squirrel as the large paper bag it was carrying prevented it from placing its front feet down. It was forced to cross the road in a succession of grotesque hops (J.C.).

FOX

Reported to have had its best season since the 'fifties' (per J.C.). The following are new localities: Old Weston (R.L.), Houghton (D.G.), Hemingford where 3 earths all within a mile radius (M.D.), Fenstanton (S.R.), Hartford (N.J.), Alconbury (M.W.), Ellington (M.W.), Spaldwick (K.L.), Southoe (D.F.), Stow Longa (D.R.), Covington (C.W.) and Godmanchester (L.J.). Two different litters of cubs were seen in the woods around Monks Wood (R.S.). The earths at Abbots Ripton were unfortunately gassed by keepers to control numbers (M.D.). A rather disturbing report was received of cubs being dug out of an earth and subsequently being offered for sale in a Huntingdon pet shop. At Brampton a fox was seen with two rabbits in its mouth one of which it subsequently released (M.C.).

STOAT

More records have been received than last year – perhaps this species is more plentiful than previously thought. Seen at Fenstanton (M.F.), Somersham (B.M.L.) and a number seen crossing fenland roads around Holme (A.W.). At Spaldwick a total of 5 were recorded including one frozen in ice, compared with only 2 weasels reported during the same period (C.P.). One at Thrapston was reported to be almost ferret size and showed no fear of a dog at all (S.M.D.). Two at Brampton race course (K.L.) and probables at Ellington (D.D.) and Graveley (T.R.J.) A possible at Catworth (S.M.).

An example of either this species or the next was seen to climb a tree, jump into Alconbury brook, and swim to the opposite bank (I.R.). Stoats, in fact swim more readily than weasels.

WEASELS

Recorded fromat least 11 localities (m.o.). One at Brampton was seen attacking young rabbits (D.H.). Another caught by a cat was preserved at school (D.P.).

AMERICAN MINK

During the last 2 weeks of July family parties of 6 and 3 were seen on the River Ouse near St. Ives. These probably owed their origin to escapes from a mink farm at Houghton Hill (B.M.L.).

BADGER

With a total of over 20 setts located this species can clearly be regarded as well established in Hunts. This is rather surprising in view of the very low acreage of woodland here. With few exceptions all are within a seven mile radius of Huntingdon, partly because this is the main area from which society records come, but also because the population rapidly thins out in the fens north of Huntingdon.

Badgers now have legal protection under a new Act which came into effect at the end of January 1974. They can still be controlled if they cause economic damage but the taking of badgers for sport, for their skins or as pets is prohibited. However it was still thought to be wise not to publish the exact location of the setts.

OTTER

Evidence of breeding close to Huntingdon (C.L.). Only one other report of these otters has come in (per D.A.H.) but apparently the otter hunt has been turned off the area in previous years. Two past records have come to light, both referring to the Hartford area about 3 years ago (K.G., A.C.). In one case cubs were seen as well. Dr. Jeffries of Monks Wood would welcome any information past or present concerning otters in Hunts. or Beds.

COMMON SEAL

A young one surfaced six feet away from a fisherman at St. Ives staunch in early August. The record was later confirmed by other observers (per B.M.L.). This is not the first time that seals have come in from the Wash along fenland waterways.

DEER

Muntjac deer were recorded at Southoe (D.F.), Brington (S.L.), Holme (A.W.), and Covington (C.W.). The report of Muntjac at Woodwalton (see 1972 report) may refer to Chinese Water Deer. According to the Norfolk Mammal Report a small herd has been recorded from there.

COYPU

Seems to be fairly well established in the fens around Holme (A.W., D.V.H.). This large rat–like relative of the porcupine escaped from fur farms to become a serious pest undermining dykes and damaging crops and numbers are carefully controlled. Apparently traps were set for Coypu on the river bank at Holywell as long ago as the severe 62–63 winter (B.M.L.).

LIST OF CONTRIBUTORS

Allen Bostock	A.B.	Rosemary Lea	R.L.
Tim Berrington	T.B.	Victoria Leach	V.L.
Mr. Brewer	F.B.	Colonel Leigh	C.L.
Elaine Brighton	E.B.	Kevin Loakes	K.M.L.
Mr. Butler	M.B.	Stuart Loakes	S.L.
William Butler	W.B.	Kim Lupton	K.L.
Martin Cannon	M.C.	Peter Marchant	P.T.M.
David Cartwright	D.C.	Steven Millbank	S.M.
Alan Chadney	A.C.	Mr. Mills	J.M.
Keith Chester	K.C.	Mr. Milne	B.M.L.
Mr. Clark	J.C.	Susan Newman	S.N.
David Cooper	D.A.C.	Nicholas O'Connor	N.O.
Gary Crack	G.C.	Simon O'Connor	S.O.
Simon Dix	S.M.D.	Mr. Peacock	D.P.
Dean Drage	D.D.	Christopher Plummer	C.P.
Mr. Drage	M.D.	Debbie Read	D.R.
Nigel Early	N.E.	Linda Roberts	L.R.
David Ereira	D.E.	Timothy Rosamond	T.R.
Allyson Evans	A.E.	Mrs. Royston	S.R.
David Felce	D.F.	Robert Staines	R.S.
Mr. Findlay	P.F.	Nicholas Stockley	N.S.
Mrs. Fisher	M.F.	George Stratford	G.S.
Dr. Gobbet	D.G.	Simon Summers	S.S.
Keith Griffin	K.G.	Mr. Thomas	M.T.

Dario Hasko	D.A.H.	David Tutton	D.T.
Rory Hart	R.H.	David Vaughan	D.V.
David Hamilton	D.H.	Gaye Vivian	G.V.
David Hewitt	D.V.H.	Chris Wheelan	C.R.W.
Lorraine Horner	L.H.	Catherine White	C.W.
Mrs. Hathway	M.H.	Mrs. Wilson	M.W.
Michael Jeffree	M.J.	Allen Williams	A.W.
Timothy Jeffree	T.J.	Gareth Sweeting	G.S.W.
Linda Johnson	L.J.	Dennis Young	D.Y.
Trevor Jones	T.R.J.		

BIRD REPORT FOR 1973

E.T. Lees

Observers had another good year with the usual influx of interesting visitors to reward their patient dedication. Possibly the most outstanding event from Grafham Water was the visit by a Red–necked Phalarope. This was confirmed by several experienced observers. From a personal point of view the most comforting news came from the north of the county where a Red–backed Shrike was observed at close range for several minutes at Farcet. To the best of my knowledge this is the first report of a sighting in the county for a decade, and as the estimated number of breeding pairs in the whole country is down to 25 or 30 this is wonderful news. There is a good chance from the date (12th May) that the bird was mated and a brood reared. A keen look out during the coming season and, if necessary, strict protection may help to preserve this interesting bird as a breeding species.

More information is also required on breeding pairs of those birds which were once very common in the county and are now reduced to small numbers such as Whitethroats, Chaffinch, Spotted Flycatcher, Owls, Snipe and Chiffchaff.

Thanks are due to all observers who have submitted a record number of reports and especially to Dr. Arnold Cooke for the Grafham Water Bird Report, and Messrs. Thomas and Clark of Hinchingbrooke School for permission to use extracts from the 1973 Hinchingbrooke Natural History Society Report.

The following abbreviations are used in the systematic list

(G.E.D.A.)	Mr. G.E.D. Alcock	(R.L.)	Mr. R. Lovell
(V.D.A.)	Mrs. V.D. Angell	(K.M.)	Mr. K. Mason
(P.D.B.)	Mr. P.D. Birch	(J.F.L.P.)	Mr. J.F.L. Parslow
(A.S.C.)	Dr. A.S. Cooke	(R.S.)	Mrs. R. Smout
(D.O.E.)	Mr. D.O. Elias	(M.J.S.)	Mr. M.J. Schofield
(M.J.G.)	Mr. M.J. Green	(M.T.)	Mr. M. Thompson
(M.H.)	Mr. M. Howes	(P.T.)	Mr. P. Tizzard
(P.H.)	Mr. P. Holdich	(Rec)	Recorder
(C.A.E.K.)	Mr. C.A.E. Kirtland		
(H.N.H.S.)	Hinchingbrooke Natural History Society Report		
(G.W.B.R.)	Grafham Water Bird Report.		
G.P.	Gravel Pits	(m.o.)	Many observers

1. Black–throated Diver Earith, 6th January, observed on land for 20 minutes (Rec)

4. Red–throated Diver Brampton, 10th February in centre of River Ouse repeatedly diving (Rec)

6. Red–necked Grebe Grafham Water, 20th Sept. 1 juvenile (C.A.E.K.), 1 on 30th September (M.H.) 2 on 4th and 10th October (C.A.E.K., M.H.)

7. Slavonian Grebe Grafham Water, 1–3 between 13th and 20th October (M.H., K.M., C.A.E.K)

8. Black–necked Grebe Grafham Water, 1 on 8th November (C.A.E.K.)

28. Cormorant Huntingdon, 2 on 12th January (M.H.) 1 on St. Ives, 1 on 28th March (P.H.). Orton, 1 on 4th May and Fletton, 2 on 6th May (G.E.D.A.). St Ives, 1 on 18th September and Grafham, 1 on 23rd September (H.N.H.S.)

30. Grey Heron Hemingford Park, about 30 pairs (Rec). There are no reports of breeding at other sites.

46 Teal Fletton, 1 on 18th November and 2 on 15th December (G.E.D.A.)

49 Gadwall Fenstanton G.P. 1 on 2nd February (M.H.)

54. Red–crested Pochard Grafham Water, 2 on 18th February (G.W.B.R.), 2 on 2nd November (C.A.E.K.), and 10 on 20th November (M.H.) Fenstanton G.P., 1 on 21st October (M.H.). Little Paxton G.P. 1 female on 6th December (C.A.E.K.).

55. Scaup Grafham Water, 21 during January–April (m.o.), 9 on 6th December (C.A.E.K.)

57 Pochard Fenstanton G.P., 2 pairs during April and May, no evidence of successful breeding (P.H.)

60. Goldeneye Grafham Water, 1 female on 21st October (C.A.E.K.)

61. Long–tailed Duck Grafham Water, 1 female from 26th November 72 to 14th April 1973 (m.o.). Little Paxton G.P. 1 on 26th April (C.A.E.K.).

64. Common Scoter Grafham Water, 4 on 4th October (C.A.E.K.)

69 Red–breasted Merganser Fenstanton G.P. 1 female on 14th April (M.H.). Grafham Water, 1 male on 10th July (R.S.).

71. Smew Grafham Water, 1 male on 27th December (C.A.E.K.)

73 Shelduck Little Paxton G.P. 2 on 7th April (M.H.)

75. Greylag Goose St. Ives, 106 on 29th September (M.H.)

– Pink–footed Goose – Grafham Water, 22 on 7th January and 2 on 18th March (G.N.B.R.)

82. Canada Goose Earith, 1 on 31st March (Rec). Fenstanton G.P., 1 on 6th April (M.H.). Fletton, 37 on 18th November (G.E.D.A.)

85. Whooper Swan Berry Fen, Earith, 4 on 1st November (P.H.)

86 Bewick Swan Berry Fen, Earith, 25 on 29th January (M.H.)

91 Buzzard Fletton, 2 on 13th May circling over old clay pits (G.E.D.A.). Monks Wood, 1 on 18th September (D.O.E.)

92 Rough–legged Buzzard Holme Fen, 1 on 7th November (G.E.D.A.). Monks Wood 1 on 30th November (D.O.E.). Probably the same bird which was also seen by others during November.

93. Sparrowhawk Monks Wood, 1 during April (D.O.E.). Spaldwick, 1 on 2nd May (Rec). Wennington, 1 during May and June (H.N.H.S.).

99. Marsh Harrier Monks Wood, 1 male on 15th November (D.O.E.) and 1 on 30th November, (G.E.D.A.).

100. Hen Harrier Farcet, 1 during September (G.E.D.A.). Woodwalton Fen, 1 on 30th November (G.E.D.A.). Grafham Water, 1 observed several times 17th November – 9th December (H.S. and others)

103. Osprey Woodwalton Fen, 1 remained for several weeks from 2nd September (D.O.E.). Holme Wood, 1 on 21st September probably the same bird (G.E.D.A.).

104. Hobby Conington, 1 on 26th May and Little Paxton, 1 on 9th June (M.H.). Somersham, 1 on 9th July and Fenstanton, 1 on 21st July (H.N.H.S.). Monks Wood 1 on 25th September (J.F.L.P.).

110. Kestrel Numbers about the same as last year (Rec).

120. Water Rail Kimbolton, 1 on 28th January (M.S.). Reports of pairs seen during the breeding season on several gravel pits (m.o.).

131. Oyster catcher Grafham Water, 1 on 1st March (G.W.R.), 18th–19th March and 12th – 13th September (R.S.).

134. Ringed Plover Grafham Water, 13 pairs bred (R.L., K.M.). Also reported from several gravel pits.

135. Little Ringed Plover Grafham Water, 16 pairs bred (R.L., K.M.). Also bred at Buckden, Earith, Fletton, Little Paxton and St. Ives (m.o.).

139. Grey Plover Grafham Water, 2 on 4th October (C.A.E.K.) and 1 on 6th October (M.H.).

143. Turnstone Grafham Water, 1 on 4th January (G.W.B.R.)

147. Jack Snipe Grafham Water, 1 on 18th and 25th February (G.W.B.R.) and 1 on 4th April (A.S.C.). St. Ives, at least 4 wintering birds (H.N.H.S.).

148. Woodcock "Bankside", Great Paxton, 1 during January and February (V.D.A.), slight increase in breeding pairs reported from wooded areas of the county (Rec).

150. Curlew Earith, 2 on 21st April (Rec). Monks Wood, 1 on 5th October (D.O.E.).

154. Black–tailed Godwit Grafham Water, 1 on 15th March (G.W.B.R.), 7 on 27th August (M.T.) and 1 on 12th September (C.A.E.K.).

155. Bar–tailed Godwit Grafham Water, 2 on 26th April (P.T.) and 1 on 29th April (C.A.E.K.).

156. Green Sandpiper Wintering birds reported from several gravel pits in the county (M.H.).

157. Wood Sandpiper Grafham Water, 1 on 20th September (C.A.E.K.) and 1 on 6th October (M.H.).

160. Spotted Redshank Grafham Water, 1–3 from 27th August to 20th September (m.o.).

165 Greenshank Grafham Water, 1–7 from 20th July to 30th September (m.o.). Earith G.P. 1 on 29th September (M.H.).

169. Knot Grafham Water, 1–3 from 12th September – 27th December (m.o.).

170. Purple Sandpiper Grafham Water, 1 on 6th October (M.H.).

179. Curlew Sandpiper Grafham Water, 1–6 from 16th August to 10th October (m.o.)

181. Sanderling Grafham Water, 1 on 12th September (R.S.), 1 on 20th September (C.A.E.K.) and 1 on 30th September (M.H.).

184. Ruff Grafham Water, 6 on 15th April (C.A.E.K.). Orton, 4–6 from 23rd July to 1st September (G.E.D.A.)

185. Avocet Grafham Water, 1 on 20th May (M.J.G.).

188. Red–necked Phalarope Grafham Water, 1 on 31st August (R.S.). A very rare visitor.

189. Stone Curlew Pidley, 2 on 6th October (Rec).

193. Arctic Skua Grafham Water, 6 on 3rd September (M.T.) and 1 on 17th October (C.A.E.K.).

207. Little Gull Grafham Water, 2 on 9th August (R.S.) and 1–4 from 12th to 30th September (M.H., C.A.E.K.).

212. Black Tern Grafham Water, 1–12 migrating birds during spring and autumn (m.o.). St. Ives, 3 on 4th May (Rec).

217 Common Tern Fenstanton G.P. 3 pairs bred (H.S.). St. Ives 1 pair bred (Rec). Yaxley, 13 pairs had nests with eggs and 15 young were later ringed (G.E.D.A.).

222. Little Tern Grafham Water, 1 on 20th July (C.A.E.K.) and 1 on 22nd September (P.D.B.).

223. Sandwich Tern Grafham Water, 3 on 20th September (C.A.E.K.)

241. Barn Owl Brampton, Holme and Stanground (m.o.). Fletton, 1 found dead on 20th May (G.E.D.A.). Reports from Hinchingbrooke School suggest a slight increase throughout the county.

246. Little Owl Reported from most areas of the county in small numbers (m.o.).

247. Tawny Owl Godmanchester, 1 on 24th April (P.H.). Holme, 1 young bird on 28th May (G.E.D.A.). Missing from several known sites this year (Rec).

248 Long–eared Owl Upton, 2 on 30th March, female flushed from old crow's nest and male on the side of a nearby tree. Hinchingbrooke, 1 on 13th June (H.N.H.S.). Holme, 1 dead on 8th July (G.E.D.A.).

249. Short–eared Owl Bluntisham, 2 on 12th November (Rec). Holme, 2 on 15th December (G.E.D.A.). Upwood, 2 hunting over airfield October – December (G.E.D.A.).

252. Nightjar Coppingford, 1 on 266th May (Rec). Holme, 1 on 30th May (G.E.D.A.).

258. Kingfisher Another successful breeding season and a continued slight increase (m.o.).

262. Green Woodpecker Fletton, 2 on 19th March (G.E.D.A.). Orton 1 on 14th May (G.E.D.A.). Earith, 2 on 23rd May (Rec).

263. Great Spotted Woodpecker Holme Wood, 1 heard drumming on 7th May (G.E.D.A.).

264. Lesser Spotted Woodpecker Monks Wood, 1 pair with 2 young during spring and summer. The first breeding record for Monks Wood (D.O.E.).

289. Hooded Crow Kimbolton, 2 on 19th January (m.o.). Oldhurst, 3 on 10th February (P.H.). Alconbury, 1 dead on 4th February (M.H.).

284. Magpie Fenstanton, 2 observed nest building in a tall willow on 4th April. There were no other reports of breeding (Rec). Ramsey, 1 on 1st November (G.E.D.A.).

295. Bearded Tit Grafham Water, 3–8 from 3rd December 1972 to 11th March (G.W.B.R.). Little Paxton, 20 during January and February (M.H.). Hemingford, 6 on 11th February (M.H.). Farcet, 2 on 15th October (G.E.D.A.). Orton, several seen and heard in reed bed 20th October (G.E.D.A.). Grafham Water, 14 on 25th November 2 bore Dutch rings.

296. Nuthatch Kimbolton, pair with 3 young feeding on old oak tree. Occasionally seen in Brampton Wood and Brampton race course but no sign of nesting.

307. Ring Ouzel Brampton, 1 on 10th – 13th April (K.M.).

317. Stonechat Somersham, 1 male on 4th April perched on wire fence along Chatteris Road (Rec). Farcet, 1 male on 8th December and Conington, 1 on 22nd December (G.E.D.A.).

318. Winchat Houghton, 1 male on 27th April (M.H.). Grafham Water, 2 on 4th May (C.A.E.K.).

320. Redstart Brampton Wood, 2 on 23rd April (Rec). Holme Wood, brood reared (G.E.D.A.).

321. Black Redstart Grafham Water, 1 on 18th March (G.W.B.R.). St. Ives, 1 male on 9th April (H.N.H.S.).

322. Nightingale Monks Wood, 24th April onwards 9 pairs bred. A good increase with prospects of a spread to other localities (D.O.E.).

327. Grasshopper Warbler Brampton, 1 heard on 25th April (Rec). Monks Wood, 2 on 2nd May (D.O.E.). Godmanchester, 1 on 16th May (Rec) and Hemingford Park, 1 in May, (H.N.H.S.). The last 2 could be the same bird as the sites are very close.

347. Whitethroat St. Ives, 1 on 18th May (Rec). Monks Wood, 1 male heard singing on 2 dates (D.O.E.). This and the next species still scarce.

348. Lesser Whitethroat Monks Wood, 1 male in May (D.O.E.). Hemingford, new nest found but not used, birds not seen (Rec).

368. Pied Flycatcher Monks Wood, 1 on 22nd August, a rare visitor last recorded in 1969 (D.O.E.).

379. Rock Pipit Grafham Water, 2 on 4th and 17th October, 1 on 25th October (C.A.E.K.).

380. White Wagtail Godmanchester, 5 on 1st April (M.H.).

381. Grey Wagtail Monks Wood, 1 on 19th and 25th September (D.O.E.). Stirtloe G.P., 1 on 8th November (C.A.E.K.).

384. Great Grey Shrike Grafham Water, 1 on 21st January (G.W.B.R.). Woodwalton, 1 on 10th December (G.E.D.A.).

388. Red–backed Shrike Farcet, 1 perched on a garden fence on 12th May (G.E.D.A.).

391. Hawfinch. Monks Wood, 1 on 1st February and 2 on 12th June (D.O.E.). Fletton 1 on 18th February (G.E.D.A.).

397 Redpoll. Large numbers reported during late autumn, numbers of breeding pairs continue to increase at known sites (M.O.).

422. Lapland Bunting. Grafham Water, 1 on 14th April (P.T.).

LIST OF MEMBERS – 1ST JANUARY, 1974

Alcock, G.E.D., Antares, 55 Broadway, Farcet, Peterborough.
Alcock, (Mrs.) Antares, 55 Broadway, Farcet, Peterborough.
Angell, Mrs. "Bankside", Great Paxton.
Atkinson D.K. (Mrs.) Burnaby Cottage, Brampton.
Aylward, A.G., Old Dixeys, Great Gransden, Sandy, Beds.

Bawtree, E.A. (Rev.), The Rectory, Hemingford Abbots.
Benson, H. 81 Granville Street, Peterborough.
Blackie, J.E.H. The Bell House, Alconbury.
Blackie, (Mrs.), The Bell House, Alconbury.
Buchanan, M. (Mrs.), 5 East Street, Kimbolton.

Carter, S. Danewood, Common Lane, Hemingford Abbots.
Chandler, J.H. 43 Roman Bank, Stamford, Lincs.
Chandler, (Mrs.) 43 Roman Bank, Stamford, Lincs.
Clarke, O.D. (Miss), 8 The Walks East, Huntingdon.
Cobbold, R. 22 Southoe Road, Farcet, Peterborough.
Cole, J.H. 2 Lenton Close, Brampton.
Coulson D.A. (Mrs.) Spring Cottage Farm, Alconbury.
Croft, J. (Mrs.), 12 Spaldwick Road, Stow Longa.

Davies, D.A., 48 Desborough Road, Hartford.
Davies. (Mrs.), 48 Desborough Road, Hartford.
Davies D.E.P., 20 Lodmoor Avenue, Radipole, Weymouth.
Davies, B.N.K. (Dr.), Brook House, Church End, Easton.
Dewey, F.M. (Mrs.), 5 Rosslyn Avenue, Chingford, Essex.
*Dony, J.G. (Dr.), 9 Stanton Road, Luton, Beds.

* Hononary Member

Elias, D., Sloe Rise, Alconbury Weston.
Elloway, R.E., 64 Andrew Road, Eynesbury, St. Neots.

Fawell, J.K., Inveresk Res. International, Inveresk Gate, Musselburgh, Midlothian.
Fawkes, A.L., Meadow Bank, Thicket Road, Houghton.
Fawkes, (Mrs.), Meadow Bank, Thicket Road, Houghton.
Fitton, R.A., White Hall, Sawtry.
Foxen, F.W., "Watermill", Back Lane, Holywell.
Fuller, M., 102 Lincoln Road, Peterborough.

Gaynes Hall (H.M.B.I.), Great Staughton.
Gilbert, J.L., The Herbarium, Royal Botanic Gardens, Kew, Richmond, Surrey.
Ginn, H.B., British Trust for Ornithology, Beech Grove, Tring, Herts.
Goodliff, P.E. (Miss), 4 The Walks North, Huntingdon.

Heath, J., 104 Needingworth Road, St. Ives.
Heath, (Mrs.) 104 Needingworth Road, St. Ives.
Henderson, E. (Miss), 7 Winn Close, Buckden.
Hersey, D.C., (Miss), Halloween, 13 Braggs Lane, Hemingford Grey.
Holdich, P., 42 Feoffees Road, Somersham.
Horrill, A.D., (Dr.) Merlewood Research Station, Grange over Sands, Lancs.
Howes, M., 3 Dene Close, Hartford, Huntingdon.
Hunts & Peterborough County Library, Huntingdon.
Huntingdon Research Centre, Huntingdon.

Ing. B., Science Department, Chester College, Cheyney Road, Chester, CH1 4BJ.

Jenkins, G. (Dr.), Lodge Cottage, 13 Church Street, Hemingford Grey.
Jenkins, (Mrs.), Lodge Cottage, 13 Church Street, Hemingford Grey.
Johnson, M.I., (Mrs.), 7 Helens Close, Upwood.

Kimbolton School, Natural History Society.

Lavender, D. 6 The Glen, Old Fletton, Peterborough.
Lavender, (Mrs.), 6 The Glen, Old Fletton, Peterborough.
Lees, E.T., 14 Eaton Close, Hartford, Huntingdon.
Lewin Smith, R.G. (Dr.), 29 Park Crescent, Peterborough.
Lewin Smith, J.M., Abbey Cottage, Fordham, Ely, Cambs.
Lovell, R. (Mrs.), Highfield Farm, Perry, Ellington.

Mackay E.M. (Mrs.), "Wyatts", 2 Wood End, Bluntisham.
Macnab, D. (Mrs.), 3 The Walks North, Huntingdon.
Marriott, J.A., Monks Wood Bungalow, Abbots Ripton.
Marsland, G., 6, Dale Close, Orton Waterville, Peterborough.
Marsland, (Mrs.), 6, Dale Close, Orton Waterville, Peterborough.
Mellanby, K. (Prof.), Hill Farm, Wennington.
Moore, N.W. (Dr.), The Farm House, Swavesey, Cambs.
Moore, F.M., Kimbolton School, Kimbolton.
Morris, M.G. (Dr.), Orchard House, The Thorpe, Hemingford Grey.

O'Lenahan, K., 19 Thongsley, Huntingdon.

Patston, T.E., 12 Mill Road, Nassington, Peterborough, PE8 6QA.
Pollard, E. (Dr.), Cherry Trees, Houghton Hill, Houghton.
Priestley, A.C., (Mrs.), The Coneygarths, Buckden.

Rose, V., 181 Fletton Avenue, Peterborough.
Rose, M. (Mrs.), The Heath, Bluntisham.

Schofield, J.M., 33 Rectory Lane, Southoe.
Scott B., 4 Adelaide Walk, Earith.
Seebohm. P. (Mrs.), Rainbow Cottage, W. Perry.
Skelton, M., Biological Records Centre, Monks Wood Experimental Station, Abbots Ripton.
Sisson, (Mrs.), Hall Farm, Godmanchester.
Smout, M. (Mrs.), 10 Hawkins Close, W. Perry.
St. Ivo School, Entomology and Natural History Society, St. Ives.

Tebbs, H.F., 46 Grange Avenue, Dogsthorpe, Peterborough.
Tebbs (Mrs.), 46 Grange Avenue, Dogsthorpe, Peterborough.
Tebbutt, C.F., The Pheasantry, Wych Cross, Forest Row, Sussex.
Thackray, E.M. (Miss), 7 The Walks East, Huntingdon.
Theakston, R.M. (Mrs.), 8A Brampton Road, Huntingdon.
Titterington, D.W., 25 Oaklands Avenue, Wistow, Huntingdon.

Walden, H.C., 8 Post Street, Godmanchester.
Walden (Mrs.), 8 Post Street, Godmanchester.
Wallis, L.W., 27 Manor Gardens, Buckden.
Walters, M. (Dr.), Botany School, Downing Street, Cambridge.
Ward, L. (Dr.), Monks Wood Experimental Station, Abbots Ripton.
Ward, M., 3 Green Close, Great Staughton.

Warren, D.H., 1 Rosecrea Terrace, St. Johns Street, Huntingdon.
Welch, R.C (Dr.), Monks Wood Experimental Station, Abbots Ripton.
Welch, (Mrs.), Monks Wood Experimental Station, Abbots Ripton.
Wells, D.A., 14 Tithe Close, Hilton.
Wells, T.C.E., 94 High Street, Upwood.
Wells, (Mrs.), 94 High Street, Upwood.
Woodhead F.A., (Mrs.), 36 Holdfield, Peterborough, PE3 7LN.
Worden, A.N. (Prof.), Cross Keys Orchard, Hemingford Abbots.
While, P. "Bankside", Great Paxton, St. Neots.
While, H. (Mrs.) "Bankside", Great Paxton, St. Neots.
Wolff, W.A., 1 George Street, Huntingdon.

THE HUNTINGDONSHIRE FAUNA AND FLORA SOCIETY
(The County Natural History Society)

The Society exists to promote the study, preservation and recording of wildlife by the encouragement and publication of the results of research, the holding of meetings and such other activities as may forward the above–mentioned purposes of the Society within the county of Huntingdon and now also of Peterborough.

Membership is open to all who are interested in natural history, for a subscription of £1 payable on January 1st each year.

The affairs of the Society are conducted by a Committee consisting of a President, a Chairman, a Treasurer, one or more Honorary Secretaries and eight ordinary members (exclusive of co–opted members), elected by the members of the Society at the A.G.M., usually held in March. The Committee annually elects recorders to assist with the identification of specimens and to prepare contributions to the Annual Report, which members receive free.

The Society hold field meetings at sites of interest at regular intervals during the summer and autumn, and indoor meetings during the winter.

If you are interested in the work of the Society and would like to join, please contact the Secretary or Treasurer.