Hall Yard Wood, Fordham, Nature Reserve *W. H. Palmer*

Nature in Cambridgeshire

No. 12 1969

Published by
Cambridgeshire and Isle of Ely Naturalists' Trust Ltd
with the support of the Cambridge Natural History Society

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EDITORIAL

We publish this year the names of some 250 members who have joined the Trust since we last went to press. The campaign to get new members is still in full swing, and during 1969 will be specially directed towards those who reside in country districts rather than in Cambridge. It may be noticed that the 1968 excursions were (with one exception) all to the Trust's Reserves. Anyone who was sufficiently fortunate, as the Editor was, to be able to attend all these meetings could not fail to have been impressed by the importance of the work which the Trust is doing in preserving these interesting areas. Nor were those larger and more familiar sites administered by the Trust such as the Welches Dam Washes, Hayley Wood or Fulbourn Fen among the areas visited.

It need hardly be pointed out that the expenses of the Trust increase with every Reserve acquired—hence the continual need to campaign for new members. Any encouragement that present members can give to their friends and acquaintances in this matter will be greatly appreciated.

Obituary

HUMPHREY GILBERT-CARTER 1884–1969

Humphrey was a legend in his own lifetime; his passing is the end of an era for his innumerable friends in Cambridge and beyond. When eighty of us gathered in October 1964 for a lunch to celebrate his eightieth birthday, few could remember Cambridge without him or imagine the time when he would be with us no more.

Humphrey Gilbert-Carter came up to Cambridge to study botany in 1909, having previously qualified and practiced for a time in medicine. After a few years as an economic botanist in India, he returned in 1921 to be Director of the University Botanic Garden until he retired in 1950. During these thirty years he inspired generations of students and amateur botanists to know living plants as personalities worthy of our study and our love. The dedication by Clapham, Tutin, and Warburg of their Flora 'To Humphrey Gilbert-Carter, to whose stimulating teaching and wide knowledge of plants we, his pupils, owe so much' could not have been more fittingly chosen.

Those who knew Humphrey in his prime, treasure bright memories of the botanical excursions he led in the far-off summer days of thirty or forty years ago. There were walks on Coe Fen and Grantchester Meadows to study willows with, perhaps, a pause under a poplar tree to listen to the rustle of the leaves. He took a great interest in Wicken Fen, and we used to cycle there by way of Waterbeach and the fen droves to Upware; here his booming voice would call the ferryman

from the 'Five Miles from Anywhere' to take twenty of us, and our bicycles, across the river on the horse-grind. Then there were long days on the hot and sandy Breckland when, just as most of us were dropping with exhaustion, Humphrey would say to his indefatigable co-leader, 'Harry, I am going to have my lunch here.' With blessed relief, we would sit round him to eat ours, plying him with questions on the finer points of identification or the medical properties of plants we had found, or encouraging him to embark upon one of his inimitable philogical rambles. When a student shewed him something particularly attractive he, or more likely she, might be told, 'That is a dignified plant, take it for your vase.'

Humphrey took a keen interest in all aspects of local natural history. He was one of the earliest members of the Naturalists' Trust, and always came into the office for the latest news during his frequent visits to Cambridge after his retirement to Devon. One such visit could be anticipated about the time of the Natural History Society's Conversazione, which he never liked to miss. Another fixture in his calender was the meeting of the Wicken Fen Committee in July; until recently he also went on the afternoon perambulation of the Fen, and the pleasure of this event is now sadly diminished without his kindly presence. Botany is probably the oldest and most liberal of the sciences, and through Humphrey we have learned anew in our generation how amateur and professional can work happily together in her service. W.H.P.

TWELFTH ANNUAL REPORT, 1968

The most significant single fact during this year has been the dramatic increase in our membership of 45 per cent. This means that our target of 1,000 members was achieved by the end of December, but annual fall-out means that we must continue our efforts to keep up this figure. Our sights are now set on a target of 1,500 to be achieved by 1971. It is hoped that more and more new members, as well as those of longer standing, will be able to take an active part in the affairs of the Trust during the coming years. The expansion of our reserves has slowed down after last year's unusual increase, and we are now facing the repayment of the loans that have made some of this possible—especially in the Ouse Washes. It is now necessary that we think more of reserve management, and much work has to be done to put our property into order, and to develop our conservation interests. This does not mean that we must cease to acquire land; we shall continue to do so when the opportunity occurs. A welcome increase in the interest taken in conservation work by the general public and by official bodies has been noticeable, and this is one of the most

encouraging things of the whole year. Our Trust has fully played its part in this respect.

The passing of the Countryside Act in 1968 has also brought new work and problems to the Trust. As a result of the Trust's work and initiative, an independent Countryside Advisory Working Party has been set up to advise the County Council on matters arising from the new Act. The Working Party has the approval of the County Council whose representatives attend meetings, and it is made up of about ten organisations representing most aspects of countryside affairs. Its Chairman is Peter Conder, Director, Royal Society for the Protection of Birds, and its Secretary is our own, Robert Payne.

Administration

The work load increases constantly as we become more and more involved in new projects, not to mention the large increase in membership. Mrs Morley continues to give cheerful and efficient service with her typing, duplicating and other duties and now receives generous voluntary help from a number of other members. Miss Bridget Nevinson and Mrs Bourne have coped splendidly with the increased membership work without a grumble. We are also grateful to Mrs Stirland and Mrs Wilson for their valuable weekly help, not to mention a whole group of ladies who help at peak times.

After the upheavals of last year we seem to have settled down and there are very few administrative changes to record for 1968. Frank Perring has given up the Hon. Secretaryship of the Field Committee to Clement Marshall, and his Acting duties on the Technical Committee to Derek Wells. Dr Doling has given up his duties as Hon. Secretary of the Education Committee on leaving Cambridge; his departure was much regretted but we feel lucky to have been able to persuade David Alexander to take over from him.

Miss Gingell, who has carried out the duties of Press Secretary so well for some years, has been forced by ill-health to give up this work. Ian Hepburn has generously taken it on in addition to his editorial duties. Clifford Spode has now settled in as Treasurer, and is keeping our feet firmly fixed on the ground.

The number of local management committees, set up to manage our larger reserves, has increased to nine. They now exist for Hayley Wood, Fulbourn Fen, Thriplow Meadows, Shepreth L-Moor, Knapwell Wood, Fordham Woods, Bassenhally Pit, Norwood Road March, and the Washes. It is hoped that more and more of the management work of these reserves will be undertaken by the local committees, thus effectively decentralising a significant amount of the work done at the main office. A new Committee was set up for the Isle of Ely under the Chairmanship of Mr Childs and Secretaryship of Ken Pratt. It is intended that this Committee shall take over many

of the duties of the Field Committee in the Isle as well as co-ordinate affairs there more easily than can be done from Cambridge, owing to the inconvenience of travelling.

We continued to be deeply indebted to our President for help in many ways; this was especially apparent at all our meetings at 1 Brookside and we have greatly appreciated his many kindnesses.

Membership

Three hundred and seven new members joined in 1968 thus breaking the 1,000 barrier. This is by far the greatest increase of any year of the Trust's history and was achieved with the help of a special membership drive organised by our Secretary. Our Patron's letter was sent out to a total of 10,000 people through the good offices of the various village colleges and evening institutes of the County, and to senior members of the University. A series of meetings has been arranged throughout the County but the results of this will not be apparent before next year's annual report is prepared. We hope to be well on the way towards our next 500 by then.

New Acquisitions

The need to think carefully about money matters has placed us under an obligation not to seek new purchases as actively as in the past, but to wait until we have repaid loans and have been able to raise further funds. Nevertheless we have consolidated our reserve in the Ouse Washes near Welches Dam as and when small parcels of land have been offered, and several other negotiations are still in train. The generosity of several of our members in giving donations for this purpose has been greatly appreciated. Perhaps in 1970 we can raise enough money in connection with European Conservation Year to launch out in a big way again. Leases have been completed for Fordham Woods and renewed for an increased area of Thriplow Meadows, and we have made an agreement for the management of Knapwell Wood with the owner, Dr I. Peck.

Reserve Management

This is beginning to be a very important aspect of our activities. Apart from work directly in connection with conservation such as drainage, ponding, clearing, planting, protecting, etc., we have to honour our obligations as landowners to our neighbours and landlords. This involves us in boundary fencing, ditching, grazing, mowing, pest control and many other items, and we need an increasing amount of help from members through work parties and individual effort. A lot of hard work needs to be done to look after your estate of 600 acres.

Fund Raising

(*a*) Christmas stationery made record sales of over £550. The new calendar idea was a great success, 250 being sold. Miss Ruth Doggett and many others helped us very much with deliveries throughout the County.

(*b*) Garden Openings organised by Kathleen Gingell and her many helpers again raised the very welcome sum of over £350, despite the rainy summer.

(*c*) The Premium Bond Draw was modestly successful, bringing in about £50 profit for our funds. This method of raising money was not to everyone's taste and we thank those who are not fond of it for being tolerant of our efforts.

Reports from Committees

Business Committee

Mr J. V. Lee reports as follows:

The monthly meetings of this Committee have been dominated by three major projects: the membership and publicity campaign, the effects and application of the Countryside Act to Cambridgeshire and the Isle, and plans for European Conservation Year in 1970. One of the main concerns has been to sift and assess the wealth of ideas presented to the Committee and translate them into action.

The steady success of the membership campaign has turned the attention of the Committee to the provision of more news and activities for members. The Newsletter is taking fresh shape, features on the Trust Reserves will be prominent, and plans for winter meetings have been organised.

The Trust Reserves have continued to grow and as in previous years, careful husbanding of finances has been necessary to meet increasing demands. Efforts to purchase have been concentrated in the Washes, but with the passing of the Countryside Act and the creation of the Countryside Working Party there is reason to hope that modest aid from the local authority may be around the corner.

Field Committee

Mr C. F. Marshall reports as follows:

Reports from sites were generally satisfactory throughout the year but the Committee feels that the time has come for the existing arrangements of regions and watchdogs to be overhauled. A sub-committee, comprising Dr F. H. Perring, Mr S. R. Payne and the Hon. Secretary, is working on this.

As members of the Trust gave only limited support to some of the

excursions this year the Committee is examining ways of making the programme more attractive. The coach tour after the A.G.M. and the autumn 'fungus foray' were both well supported and will be continued. Between these two excursions two others are planned, one being an inspection of a Nature Reserve and the other a 'farm walk' to demonstrate the links between conservation and agriculture. If there is enough demand for it, coach transport will be arranged. Support for work parties, other than those at Hayley Wood, has also fallen off, perhaps due to inadequate publicity amongst new members, and this is being examined by the Committee. Mr Stakim has taken over from Mr Moule responsibility for the Trust's tools, an important but unspectacular task, whose careful performance is vital to the work parties.

The Field Committee is also indebted to Dr Perring who acted as its Hon. Secretary for a number of years and remains a member of the Committee.

Education Committee

Mr D. G. Alexander reports as follows:

Educational Nature Reserves continue to be used by groups of school children throughout the County. On the 13 June a Teachers' meeting was arranged at Fulbourn Fen Educational Nature Reserve by the Local Education Authority and was attended by about 50 teachers.

Mr W. H. Palmer has produced a Teacher's Guide to the Educational Nature Reserve at Fulbourn Fen and is preparing a Guide to the sites within easy reach of the City of Cambridge, whilst a Guide to Bassenhally Pit is in the hands of the printer.

We are most grateful to Miss Chubb who is in the process of writing legends on standardised notice boards which are to be displayed at the entrances to Nature Reserves. Display stands and boards with information about the Trust and Nature Reserves already pinned on them are now available at the Trust Office.

The demand for lectures at Evening Centres has been very great this year and it is becoming increasingly difficult to find enough lecturers to fit the varying programmes that are requested.

It was decided that the formation of a Young Naturalists' Organisation should be left until a suitable leader came forward.

Technical Committee

Mr D. Wells reports as follows:

The woodland survey was continued during 1968, but at a slower rate compared with the initial burst of activity in 1967. A 'booster' will be required if the survey is to be completed by 1970. Roadside verges continue to flourish under the willing and enthusiastic work of

the County Surveyor's Department, and further stretches have been included in the scheme, one of which harbours the Bee Orchid.

The Committee made several field trips during the year, including an extensive survey of the Soham Commons, which high-lighted the importance of these damp grasslands, now rare in the county. Certain lines of action for conserving some of these commons were proposed, and some of these have already been implemented. A survey of part of the now disused railway track near Lord's Bridge was carried out on behalf of the Committee by Miss Camilla Huxley. It is hoped that this area will become a 'linear nature reserve' by agreement with Cambridge University.

One of the encouraging features of the year was that the Trust received a request for advice from a landowner about the possibility of developing part of his land as a nature reserve. The Trust is keen to develop this side of its activities, and interested landowners might note that quite small areas may prove of great value—one of Britain's rarest plants flourishes in an area of some 350 sq. yds., managed by the Gloucestershire Naturalists' Trust for the S.P.N.R. Finally, management plans for Fulbourn Fen and Fordham Roughs were drawn up and submitted to the respective management committees.

Isle of Ely Committee

Mr K. G. Pratt reports as follows:

This is a new Committee, inaugurated early in 1968, with members drawn from various parts of the Isle and representatives from the Fenland Wildfowlers' Association, the Whittlesey Wildfowlers' Association and the County Planning Department.

The Committee has met twice during the year under the Chairmanship of Mr Robert Childs of Chatteris. Membership in the Isle has been reviewed and the Committee is pledged to support the Membership and Publicity Drive planned for 1969. The area has been divided into eight areas and area leaders appointed. It is hoped that in due time this will result in a satisfactory network of watch-dogs.

At present there appears to be no need for work parties other than those raised at Management Committee level. It has been decided to include Soham and Wicken in the Committee's area.

Hayley Wood Committee

Dr Rackham reports as follows:

Hayley Wood has again been much used for teaching, study, and research, as well as giving pleasure to many visitors who go there for an afternoon's enjoyment.

Maintenance and improvements continue to prosper. Coppicing was interrupted by the foot-and-mouth outbreak, but hard work

made up for lost time and the fifth plot was eventually finished. The sixth plot is now more than half completed. We thank members of the Trust, of the University Conservation Corps, of Homerton College and of other bodies who, with their friends and families, made up the work parties. We wish to record our appreciation of Ian Whitehead's efficient organisation, which has made this work so successful over the years.

A hide has been built in a tree overlooking the Glade, and a bridge completed at the entrance to the Wood. Much progress has been made on removing stumps and scrub from the permanent clearings so that in future they can be maintained with the motor mower. For these and other activities we are indebted to the Forester, Mr McBride, and his assistants.

Several of the scientific studies mentioned in the last report are in progress or completed. Among these was an investigation of the disappearing oxlips—at least a million inflorescences are nipped off and vanish each spring. Careful examination of damaged plants caused suspicion to fall on the deer. On 8 March, with Mr McBride's help, a plot was fenced off with sheep netting 7 ft. high, which should exclude fallow deer but nothing else. Throughout the flowering season, damaged and intact inflorescences were recorded in the fenced plot and also in a 'control' plot previously selected to be similar in situation and in the number of oxlip plants. The results are not simple. In the unfenced plot, at least 86 per cent of the inflorescences were eaten. The fenced plot escaped damage for a while, but then 63 per cent of the inflorescences suddenly disappeared with a different type of damage suggesting birds. From this pilot experiment, together with other observations in Hayley and other woods, it appears that deer may destroy most of the oxlip inflorescences, but birds can do considerable local damage, and are irresistibly attracted by a dense patch of undamaged oxlips in an area in which most of the flowers have already been consumed by the deer. More experiments are needed to resolve this complex situation. Oxlip plants are reasonably long-lived so that their continuance at Hayley is not immediately threatened, but until the problem is solved we suggest that visitors wishing to see what a display of oxlips can be like should call at Knapwell Wood on the way.

Several studies of soils, vegetation, and animals have been made for the forthcoming book on the Wood. The University Department of Aerial Photography has taken a new series of large-scale photographs in winter.

Among future improvements, several new ponds will be made by closing gaps by which water leaves the Wood. The Pond Glade will be slightly enlarged to allow duck to reach the pond. The permanent clearings are to be subdivided into plots which will be mown at different intervals and times of year: in this way we shall have a

demonstration of the effect of mowing on vegetation which will complement the one at Wicken Fen.

Two rare plants from the edge of the Wood, *Genista tinctoria* and *Salix repens*, from which seeds and cuttings were taken in 1962, have been multiplied at the University Botanic Garden and were recently replanted in more secure places inside the Wood. The bryophyte list has been extended by the discovery of several additional species along the railway.

We are most grateful to Dr Way and those who have helped him in the time-consuming duties of administration.

TREASURER'S REPORT

General Account: The Washes purchases referred to in the last Annual Report made it clear that 1968 would be a year of marked financial activity for the Trust. The Accounts (supplied separately for the first time this year to avoid printing delays) confirm this. That we have been able to set aside in the Reserves Fund half of the £2,000 loan, which ceases to be interest-free at the end of 1969, is due entirely to the generosity of those organisations, friends and members who donated £3,000 towards our purchase costs of £4,000. We finish the year with our loan and other debts some £730 in excess of our cash resources.

In 1969 we have to meet increased administrative costs and to find the means to repay the loan, which will call for the utmost efforts from us all.

Hayley Wood: This has been, in contrast, a year of quiet consolidation for the Appeal Fund, where income has exceeded expenditure by about £100. With hopes of acquiring a stretch of disused railway track and improving access to the wood, the Management Committee is looking to all existing covenantors to continue their valuable support by renewing their covenants.

EXTRACTS FROM THE REPORT OF THE WICKEN FEN LOCAL COMMITTEE

Report for 1967-68

The Appeal Committee appointed Mr S. R. Payne as part-time organiser from 1 September 1967 for one year, and the public phase of the Appeal was very successfully launched at a meeting in the Cambridge Guildhall on Tuesday, 24 October 1967, addressed by Mr Peter Scott. The excellent colour film of the Fen produced by Mr Robin Crane was given its première at this meeting, and since then has been shown on television and widely used for publicity meetings, including a National Trust film show at the Festival Hall, London. The total response to the Appeal is now approximately £49,000, of which £20,000 has come in during the public phase in the period covered by this Report.

The Nuffield Foundation confirmed their contribution to the laboratory-lecture room building part of the Appeal, and detailed plans of the new building to be erected at the entrance to the Fen were displayed at a special Open Day by invitation on Saturday, 25 May at the Fen. It is hoped that the building will be completed before July 1969.

Six of the new leaflet Guides have now been published, and are proving very useful and popular. Other publicity material now available on sale at the Fen includes sets of colour postcards and of colour slides, produced from stills taken by Mr Robin Crane during the preparation of the film.

The number of registered visitors to the Fen showed a further large increase to 9,335 (7321), made up of 6888 (5650) individual visitors and 112 (74) parties ranging in size from 6 to 52. (Figures in brackets are those for the previous year). The increase in the number of organised parties is perhaps even more important than that of individual visitors; most of these parties are educational (schools, adult education, natural history societies, etc.), and indicate the rapidly-growing use of Wicken as an educational nature reserve.

Warden's Report

The wet spring and early summer of 1967, combined with some pumping, resulted in the Fen remaining wet well into the summer. The typical Fenland plants throve under these conditions: the droves, in particular, had an outstandingly lush plant cover.

Sales of sedge continue to increase as the recently-cleared fields come into the cropping cycle. It is now quite clear that the average cleared area does not give a full crop until the second cutting—a period of 6/8 years after clearance. Progress has been made in the sale of litter. This crop is traditional on the Fen and fits in very well

with the management policy. Over £60 of litter were sold this year. The gross sales of sedge and litter exceeded £400.

THE CHARLES RAVEN MARSHLAND RESERVE

The areas round the South and West of the Mere were very wet in the spring and early summer of 1967 and gave an excellent pre-view of what is likely to be achieved when the proposed work is carried out. Shoveler, Tufted Duck and Mallard all bred in this area, as did Snipe and Moorhen. (All these nests were found). The reedfield continues to make excellent progress and quite large areas were left untouched. The areas of uncut reed must be treated under some sort of rotation if they are not to become unsuitable for harvesting. The gross value of the reed crop was about £470.

VASCULAR PLANT RECORDS

Since the publication of the List (Guides to Wicken Fen No. 3) in 1967, 10 more species have been added. The most interesting addition is the N. American water-fern *Azolla filiculoides*, recorded by Dr J. Dickson in Drainer's Dyke in September 1967 and found in some quantity in the ditch by the entrance to the Fen later in the same month. It will be interesting to see whether the plant appears again in the summer of 1968. The only other recent Cambridgeshire record is at Waterbeach.

CAMBRIDGE NATURAL HISTORY SOCIETY

President: Dr R. Bainbridge

Report for 1968

At the six General Meetings held in the Lent and Michaelmas terms the following lectures were given:

Prof. R. R. A. Coombs:	The Natural History of Immunology
Prof. N. F. Robertson:	How Fungi grow
Prof. C. D. Pigott:	Limestone Pavements
Dr J. D. Carthy:	To Clean or not—Studies on Oil Pollution
Dr P. F. Mattingly:	The Biology of Mosquito-born Diseases
Prof. J. L. Monteith:	The Natural History of British Energy

The Botanical, Entomological, Geological and Zoological sections each held some 6 meetings during the season, which were usually well attended. The Conversazione and Annual General Meeting were held in the University Zoological Department on March 15.

R. E. WILLIAMSON

Senior Secretary

Subscriptions: Life Membership: 30/–, Annual: 10/–, (compounding to Life after 4 years), Members of Training Colleges (annual): 5/–, Corporate Schools (annual): 20/–, Undergraduates (3 years): 12/6.
Applications to: Mr W. H. Palmer, Homerton College (City Secretary)
Mr A. E. Friday, Corpus Christi College (University Secretary)

FIELD MEETINGS IN 1968

Besides the seven field meetings jointly held with the Cambridge Natural History Society, there were three joint meetings with the Cambridge Bird Club to more distant sites. These were as follows:

Sunday 26 May	Cley salt-marshes, Norfolk
Sunday 9 June	Minsmere and Walberswick, Suffolk
Sunday 8 September	Norfolk coast (Snettisham and Holme) to observe autumn migration.

All the arrangements for these three excursions were made by the Bird Club, to whom we are most grateful. The meetings organised by the Trust were as follows:

Saturday, 11 May, Buff Wood, East Hatley

Despite the unsettled conditions, the sun shone brightly most of the afternoon for the first excursion of the season. Although somewhat wet underfoot, the wood was looking most attractive with the fresh young foliage on the trees and the carpets of bluebells at their best. This wood is unusual in the neighbourhood in possessing both oxlips and primroses. Although both were nearly over, a number of hybrids between them were noticed. Besides the usual spring flowers such as bugle, early purple orchids and yellow archangel, it was interesting to see so many plants of Herb Paris and Twayblade. The party was shown an extensive patch of Green Hellebore (*Helleborus viridis*)—a rare plant in the county—and a number of plants of the Spurge Laurel (*Daphne laureola*), which is more usually found in hedgerows.

The party was under the expert leadership of Dr Oliver Rackham, who has made a special study of the history of the wood. He was able to relate many small differences in the vegetation with the age of the woodland in which it occurred, and also to demonstrate the effect of coppicing of various dates on the composition of the ground flora. The whole ramble through this extensive wood was much enjoyed by the 15 naturalists who attended, and a very persistent cuckoo provided a pleasant background for a spring outing.

Saturday, 18 May, Hall Yard Wood, Fordham

Some 30 members spent a very pleasant afternoon visiting this small area of moist woodland adjoining the River Snail. The Trust has recently arranged to lease this site as a Nature Reserve, and hopes in due course to be able to lease the much larger area of alder carr, called 'Breckland Roughs', which adjoins it to the South.

As the area was an unfamiliar one, a detailed list of all the plants observed was compiled, and by the end of the afternoon 63 different flowering plants had been noted. Although no rareties were discovered, it was interesting to see so many typical plants of wet woods growing together in an undisturbed habitat. Dr Max Walters, who led the party, was very helpful in pointing out the characteristics of less familiar species to those who were unable to identify them.

Two keen ornithologists wisely kept well away from the main party throughout the afternoon, and as a result produced a fine list of 41 different birds which they had either seen or heard. To these, a botanist was able to add a woodcock to make it 42!

This is an attractive addition to the Trust's list of Reserves, since it exhibits a type of vegetation not common in the county. Once again the weather was kind, the only shower lasting less than five minutes.

Saturday, 22 June, Bassenhally Pits, Whittlesey

This site, consisting of some 10 acres of old gravel workings adjoining the Nene Washes, has recently been acquired by the Trust as an Educational Nature Reserve. Situated, as it is, in a region consisting almost entirely of arable land, it is particularly valuable. Moreover, a wide variety of different habitats—marshland, open drainage ditches, dry grassland, wet meadows and a certain amount of scrub and woodland—occur within this small area. It is therefore not surprising that some 200 species of flowering plants have now been recorded from the site.

A small party, under the leadership of Mr Ian Hepburn, spent the morning recording and were able to add a number of new names to the existing list of plants for the area. In the afternoon they were joined by a few others. The central wet area is undoubtedly the principal attraction. Here could be seen a fine display of such interesting plants as the Lesser Water-Plantain (*Baldellia ranunculoides*), the Marsh Speedwell *Veronica scutellata*), Marsh Pennywort (*Hydrocotyle vulgaris*), the Lesser Spearwort (*Ranunculus flammula*), Creeping Jenny (*Lysimachia nummularia*) and many others. And for those with a taste for sedges and rushes there were plenty of tricky species to identify. Needless to say, a visit was paid to the small patch of Water Germander (*Teucrium scordium*), discovered in 1967, and it was satisfactory to find that at least as many plants as were noticed then were again in evidence.

The site is also rich in bird life, and during the day some 40 different species were noted (including four from the open water to the East of the Reserve). The drizzly weather, however, precluded any serious observations on the insect population. Despite the conditions, the party thoroughly enjoyed their visit to this interesting site.

Saturday, 29 June, Annual Marsh Orchid Count at Thriplow Meadows

In perfect weather 14 naturalists carried out the annual count of the marsh orchids, *Dactylorhiza incarnata* and *D. praetermissa*, flowering in the Trust's meadow. This is the first time the count has been taken since the inauguration of the Management Committee following the extension of the lease which now includes the two adjoining meadows, also rich in marsh orchids. The Reserve now contains the largest population of marsh orchids in East Anglia and is probably the only locality for *Blysmus compressus* in the county.

As in former years, the grazed strips showed by far the greatest number of flowering plants, and in general a very satisfactory recovery has been made since the sharp fall in numbers recorded in 1966. The figures for the last three years are as follows:

Strip	1966	1967	1968
I (grazed by horses)	308	607	1174
II (cut)	88	124	370
III (untouched 'control')	45	66	245
IV (grazed by cows)	266	1252	1108

The counts were organised by Mrs Crompton and Mr R. Williams.

A graph of the water level in two of the meadows, recorded over nearly 10 years, has been prepared, and recording is to be continued at weekly intervals as before. The graph was shown to the observers during the interval for a picnic tea. The fence along the new boundary of the Reserve, recently erected by a Trust work-party was also much admired. The afternoon ended with a walk through the third meadow where, after a short search, the small and beautiful flowers of the Bog Pimpernel (*Anagallis tenella*) were found and once again photographed!

Saturday, 27 July, Norwood Road Nature Reserve, March

The Trust's Reserve consists of about four acres of marshy scrub adjoining the railway line near March station. At first sight it seems to possess little attraction, but it soon becomes apparent that it is a quite exceptional sanctuary for bird life, and is not without interest botanically. In such a highly cultivated district an area of relatively undisturbed vegetation is valued by naturalists, and when it is actually situated within a town it is doubly so, particularly for educational purposes.

The small party was shown round by various members of the management committee. Mr Lake, in particular, proved an admirable guide, and was able to point out a fantastic number of nests, many of them with birds still sitting. It appears that during the 1968 season some 270 different nests have been recorded on the site—the proximity of the nests in certain parts of the Reserve suggesting almost slum conditions! Particularly striking was the large number of wren's nests, but the party were shown those of many other different species ranging from reed and sedge warblers, greenfinches, goldfinches, bullfinches, chaffinches, long-tailed tits, to those of the ubiquitous thrushes and blackbirds. The thick scrub of hawthorn, elder, willows etc. clearly provides ideal conditions for these smaller birds. There is also a certain amount of permanent open water which makes a suitable habitat for such birds as coots and moorhens.

Owing to a spell of heavy rain, most of the area was extremely wet, and some of it impassable even in gumboots. This somewhat curtailed the movements of the botanical recording party. It was, however, possible to list some 80 species of flowering plants. Several plants of the Alder Buckthorn (*Frangula alnus*), a rare species in the county, were noticed. This must certainly be the most interesting plant on the site.

Saturday 14 September, L Moor, Shepreth

A very small party of half-a-dozen braved the dismal weather to visit the Trust's Reserve known as 'L Moor' (this refers to its shape). This site, consisting of a considerable area of marshland between Shepreth and Meldreth, has been leased by the Trust since 1966. It is a specially interesting Nature Reserve as it comprises one of the few remaining stretches of marshy pastureland in this district.

Half the area had been grazed since the beginning of August, and therefore offered little to the botanists at the end of the season, but the ungrazed area was full of interest. Particularly noticeable were four late umbellifers—the Parsley Dropwort (*Oenanthe lachenalii*), the Burnet Saxifrage (*Pimpinella saxifraga*), Wild Angelica (*Angelica sylvestris*) and the pale-yellow Pepper Saxifrage (*Silaum silaus*). It was also pleasant to see a nice patch of the Lesser Spearwort (*Ranunculus flammula*) and plenty of Devil's-bit Scabious (*Succisa pratensis*) in flower. There was a large patch of Marsh Pennywort (*Hydrocotyle vulgaris*, but probably the most interesting plants on the site were the sedges. These are never easy to identify, and most of them are virtually impossible to name with complete certainty so late in the season. It was therefore not surprising that there was considerable argument amongst the botanists as to their identity. In the end general agreement was reached on the names of half-a-dozen different species. Some twenty new species in all were added to the existing list for the Reserve during the afternoon.

The plants proved so interesting that the birds were given scant attention. But it is obviously a very good area for ornithology—snipe and redshank were put up from the ground when the party entered, and a kestrel continued to hover. Amongst the smaller birds, long-tailed tits and bullfinches seemed particularly prominent, but unfortunately no kingfisher (sometimes seen in the area) appeared.

Although it was exceedingly wet underfoot, it did not actually rain to everyone's surprise (this was the day before the great floods!). In the regrettable absence of Dr Perring, the party was led by Mr Ian Hepburn.

Saturday 6 October, Fungus Foray at Hildersham Hall

The last excursion of the season is traditionally dedicated to fungi, and the 30 members who turned out in delightful weather to explore the beautiful grounds of Hildersham Hall, by the kind invitation of Miss Rhodes, spent a happy afternoon identifying toadstools under the skilled direction of Dr J. J. Hudson.

One always imagines that a wet season favours the growth of fungi, and this is, of course, largely true. But on this occasion it was in the drier portions of the park under the beech trees that they were found in the greatest profusion—other parts had in fact been recently completely under water, with the consequent destruction of any fungi. However there was a fine selection to be found in these drier areas, ranging from a giant puffball (*Calvatea gigantea*), looking like a football, to the many small species of such genera as *Mycena*, etc. Some of the bracket-like species such as *Ganoderma applanatum*, growing on the older trees, were also extremely large. But perhaps the most attractive species were the 'Earth Stars' (*Gerastrum*), with their 5–6 points, which were present in large numbers.

Needless to say there were a good many enquiries as to the edibility of the various species. Dr Hudson was able to show several specimens of the dreaded 'Death Cap' (*Amanita phalloides*)—perhaps the most poisonous of all toadstools. On the other hand, when a large ring of the fleshy *Clitocybe nebularis* was found, he was able to recommend these confidently for eating in moderation. One member of the party at any rate took some home to try. Altogether an instructive an entertaining afternoon.

A WARDEN SCHEME AT OVERHALL GROVE, KNAPWELL

Peter Moule

Overhall Grove consists of some 40 acres of woodland on the boulder clay near the village of Knapwell, 10 miles West of Cambridge. Although privately owned, the wood is visited by many people, especially during April and May when the oxlips and bluebells are in bloom. In mid-April when the oxlips are at their best, the South end of the wood is a mass of yellow flowers, and later in the month large patches of bluebells appear everywhere.

Many species of birds are resident in the area, and the older trees are very suitable for owls and woodpeckers. Several different warblers are regular summer visitors, and willow warblers, chiffchaffs and blackcaps can be heard singing throughout the early summer. In addition, there is a very active badger sett in the North end of the wood and fallow deer are occasional visitors.

For several years the Trust has kept a special eye on this very interesting site and, with the owner's permission, attempted to warden the wood during the summer months. This year we decided to pay particular attention during the flowering period of the oxlips in order to discourage the over-picking of blooms and to prevent any roots being dug up. Wardens were found to patrol the wood every Saturday and Sunday afternoon during April from 2 p.m. to 4.30 p.m. and a temporary notice board was erected at the main entrance showing the Trust's posters explaining the bye-laws about flower protection in the county.

We had no difficulty in finding local Trust members to carry out this work—each was supplied with a Trust badge and a number of Trust leaflets to hand out to visitors. We were very surprised at the number of people who visited the wood while we were carrying out this scheme. There were over 500 on the four days of the Easter holiday, and a total of nearly 400 for the other weekends during April.

There was very little trouble with people picking too many flowers, and many people seemed pleased that we were taking an active interest in preserving the natural history of the wood. As a result of the success of this April venture, we decided to continue our warding as much as possible throughout the summer. Although it did not prove possible to arrange this on every Saturday and Sunday, we were able to keep a good watch on the wood during May, June and July. I should like to take this opportunity of thanking Mr T. Stakim, Mr W. Barron, Mr and Mrs Wilson, Mr and Mrs Spring and Mr and Mrs Sadler for giving up so much of their valuable spare time to make this project such a success.

THE ABANDONED OXBRIDGE LINE

Franklyn Perring and Camilla Huxley

In January 1968 the Cambridge to Bedford Section of the railway line which linked Oxford and Cambridge was closed, 106 years after its opening in 1862. During that time the banks on either side have developed considerable botanical and zoological interest. In the future the permanent way, from which the metal rails were removed during the Autumn of 1968, will develop a characteristic flora of its own, which will be equally interesting.

The Trust has begun negotiations, which it is hoped, will give members access to a stretch of the old railway west of Fox's Bridge, Comberton where it runs over the alluvial clays in the valley of the Bourn Brook towards Toft.

Because the stretch may become a linear Nature Reserve, and because the flora is bound to change after the withdrawal of the trains a survey of the present flora and its distribution was urgently needed. This survey was carried out by one of us (C.H.) during August before the rails were removed.

The railway at this point was double track. The space between the sleepers provided two sets of parallel quadrats already laid out. Every fortieth such quadrat on each side was sampled, but the first quadrat on the south side was 20 sleepers west of the first quadrat on the north side—thus sample quadrats alternated from north to south line every twenty sleepers. Each plant of each species growing in the sample quadrats was plotted in its exact position on graph paper. Each quadrat was extended towards the appropriate bank on either side, on which the plants were listed and the abundance of each species estimated. The banks are steep-sided and flat-topped, rarely exceeding a height of 6 ft.

One hundred and forty species of Flowering Plants and Ferns were recorded on this stretch of about 1000 yards, including such local rarities as *Asplenium trichomanes*, *Cirsium acaule*, *Erigeron acer*, *Galeopsis angustifolia*, *Picris hieracioides*, *Senecio viscosus*, *Sison amomum* and *Trifolium ochroleucon*. Young trees of Plum and Apple were also noted, no doubt originating as stones and cores from carriage windows.

Colonisation of the permanent way is already extensive, particularly near Fox's Bridge, where Parsley, Carrot and Hogweed are all very noticeable. Initially, it was supposed that the bridge was having a direct effect on the colonisation, but analysis of the bank flora shows that these three species are almost entirely confined to banks beside which colonisation is occurring. There is a strong correlation between the position of all species already colonising the line and the species on the banks. Only the Small Toadflax, *Chaenorhinum minus*, appears to be independent of colonisation from the banks. It is a

well-known railway plant, the small seeds of which were undoubtedly spread in the past by the gusts from passing trains.

It is intended that this survey should be repeated in future years, so that the patterns of colonisation may be followed in detail.

CAMBRIDGESHIRE FERNS— ECCLESIASTIC AND FERROVIATIC

S. M. Walters

Ferns are nowhere a conspicuous element in the vegetation of the Cambridgeshire countryside. Of the 19 species recorded for the County in the Flora of Cambridgeshire (1964), five are extinct, and most of the rest are rare or local. Indeed, there are only two Cambridgeshire communities in which any fern is found abundantly; one is the carr at Wicken Fen in which the Marsh Fern (*Thelypteris palustris*) happily still thrives, and the other is a very limited area of heath and woodland on the fringes of the County (at Gamlingay and in the east) where light sandy soils are suitable for Bracken (*Pteridium aquilinum*). Nevertheless, the fern flora of Cambridgeshire is interesting, and well repays careful study, as I will try to show.

The light spores by means of which ferns are widely dispersed are responsible for the fact that they are sensitive indicators of microclimate and micro-habitat. Everyone must be familiar with the appearance of ferns in the damp, shaded corners of old buildings. Indeed, most of the records of the rarer species in Cambridgeshire are from such artificial localities. Babington's 'Flora of Cambridgeshire' (1860) quotes a good many records of ferns on old churches and on historic buildings; and since the time of Babington the railways have supplied an impressive range of suitable habitats for ferns to colonise. Railways are now 'historic' constructions, hallowed with age and tradition or abandoned, so perhaps the present time is a good one to review the contribution of the 'ecclesiastic' and the 'ferroviatic' habitats to the fern flora of Cambridgeshire.

I shall illustrate my thesis by reference to two Cambridgeshire ferns, the Black Spleenwort, *Asplenium adiantum-nigrum*, and the Brittle Bladder-Fern, *Cystopteris fragilis*. The Black Spleenwort was recorded from Ditton and Hildersham churches by John Ray in the (very rare) Second Appendix to the 'Cambridge Catalogue' published in 1685, so we know it has been in Cambridgeshire since the seventeenth century; the Bladder Fern is a new record for the County made this year.

If we look at the old records for *Asplenium adiantum-nigrum* given by Babington, we find that practically all of them refer to churches. What are we to conclude from this? We might observe, firstly, that several of the early Cambridgeshire botanists (e.g. Richard Relhan,

who records the fern for 'Ditton and Hinton Church' in his Flora of Cambridgeshire, published in 1785) were clergymen who visited churches widely in the County and could be presumed to have to inspect their fabric in the course of their professional duties. This would clearly tend to bias the early records towards churches rather than old secular buildings. But there is probably more to it than this. Churches provide by far the largest number of old buildings to the structure of which relatively little change had been made since late Medieval times—until the middle of the last century, when Victorian restoration rescued them from neglect. Let us think a little more about the implications of neglect and care for ancient buildings in connexion with their fern flora.

A new building will only gradually collect its quota of ferns, partly, we may suppose, because the spores of all species which might germinate there are not immediately available, and partly because the habitat itself may take some time to 'mature' to provide exactly the right physico-chemical conditions for the ferns to thrive. Now, of course, we do not know how long these processes took on any of the medieval buildings of the county, for the ferns were obviously well established before Ray wrote the first County Flora; but the coming of the railways provides us with a completely datable new habitat series, and we can derive some interesting facts from the records of the Black Spleenwort since Babington's Flora (the details here are taken from the Cambridge Natural History's card index of the County Flora, kept in the University Herbarium). Of the 10 new records since 1860, four are from railway walls, two from walls constructed by the River Board by water, two from churches, one from an old secular building (Wimpole Hall) and one unlocalised ('Chatteris'). Moreover, one of these 'new' localities—the old wall between Cambridge Station Goods Yard and the Cattle Market, where the fern was first recorded in 1966—contains hundreds of plants, and must have more than all the other Cambridgeshire sites put together!

It looks, then, as if railways took over from churches as the suppliers of new localities for the Black Spleenwort. This is, we might tentatively suggest, for two reasons; firstly because they did provide a large range of potentially suitable new habitats, and secondly because railway properties have been subjected to very little restoration during the century or so over which the habitats have been maturing. We might now look at the other side of the picture—how have the ferns been faring which were recorded on churches in the eighteenth century?

During his extensive survey of the flora of Cambridge walls (published in 1948), Dr J. Rishbeth records (C.N.H.S. Card Index) that he looked for the Black Spleenwort in the following church localities given by Babington but could not find it: Hildersham, Hinton, Elsworth, Fen Ditton. He did, however, record it for a new

locality in 1947—Histon Church. He did not apparently, visit Wisbech or Tydd St Giles Churches, which are records for the fern published by John Martyn, second Professor of Botany in the University, some time after 1727*. On the 28 September 1968, three of us (S. R. Payne, my son M. G. Walters and myself), stimulated by the discovery of a flourishing tuft of Black Spleenwort on the gate-tower of the Church at West Walton (Norfolk), visited Tydd St Giles Church and succeeded in finding two small plants of the fern in a rather inconspicuous position near the ground on the north wall. We did not have time to visit the churches at Wisbech, but would recommend a search to any of our fellow-naturalists who would like to combine a taste for antiquarian pursuits with a little field botany!

Putting these admittedly rather meagre facts together, we might guess that the ecclesiastical fern flora, like the Gothic architecture, suffered rather heavily from the hand of the Victorian 'restorer'. Repointing of stone and brickwork may be very necessary, but it is likely to be fatal to the ferns. Of course, now that we are more conscious of the historic interest of some of these records, we can in favourable circumstances protect the plants, as on the steps of the Senate House in Cambridge the Wall-Rue Spleenwort (*Asplenium ruta-muraria*) is 'officially' protected in a precise Babington locality. We could hardly, however, do this with more than a very few especially interesting records, and the others must surely just take their chance.

The newcomer to the Cambridgeshire fern flora is the Brittle Bladder-Fern, *Cystopteris fragilis*. This rather delicate, attractive fern is growing under the platform of Old North Road Station on the disused Cambridge-Bedford railway. There are several vigorous fruiting plants, which must have been there for some years; until the railway was closed in 1967, however, it would have been very difficult to identify the plants without serious trespass and the fact that they escaped notice until the 14 November 1968 is not therefore surprising. What *was* surprising to me when I first saw the plants was that I was half-expecting (or hoping for!) a quite different rare fern, for which the platform of this station was the only published Cambridgeshire locality—namely the Maidenhair Fern, *Adiantum capillus-veneris*. This fern was thought to have disappeared after repointing of the brickwork after 1953 (see Flora of Cambridgeshire 1964, p. 35) . . . at any rate, it has not been seen at Old North Road since that date.

*The record is written, probably by J. Martyn himself, in pencil in a copy of his *Methodus Plantarum circa Cantabrigiam nascentium* (1727), and appeared in print for the first time in the (extremely rare) pages of a second edition of the Methodus, incomplete and unpublished. Both works are in the Library of the University Botany School. In the unpublished 'second edition' (p. 21) there is, added to the earlier records for the fern, the following: 'also on the Churches of Cherry Hinton, Wisbech and Tid St Giles'. This is the record copied by Babington and attributed to J. Martyn in the 1860 Flora.

Cystopteris is a particularly interesting arrival, because it is rare, and entirely dependent upon artificial habitats, throughout much of Eastern and S.E. England. In limestone upland regions of N. and W. Britain it is not uncommon, and there occupies both natural (rock) and artificial (wall) habitats. Unlike the Maidenhair Fern, it can owe very little, if any, of its power of spread to new habitats to its cultivation in nearby houses and gardens, so that we have here a very clear case of efficient long-distance dispersal. How far the railway itself acts as a specially efficient dispersal agent it is difficult to say, but it is certainly true that several coastal flowering plants, for example, *Cerastium atrovirens*, occur along railways many miles inland and detached from their usual habitats, and certain flowering plants with light, wind-borne fruits (e.g. *Senecio viscosus*) have spread quickly along railways in recent years. A very important factor determining the fern flora of railway platforms must be the micro-climate. In Cambridgeshire, the most 'continental' part of Britain, a shaded overhang or pit can locally provide a higher humidity, which may crucially determine the ability of ferns to thrive there. It is interesting that several *Cystopteris* plants at Old North Road Station are growing luxuriantly at the back of a dark 'cave' right under the platform, together with the largest Hart's-tongue (*Phyllitis scolopendrium*) which I have seen in Cambridgeshire, and several plants of *Asplenium ruta-muraria*.

A final point worth making is that we have had at least two successive wet summers in Cambridgeshire; and casual observation would suggest that, as a result, the fern flora of walls has been much stimulated. Presumably such minor cycles of 'favourable' and 'unfavourable' periods could have an effect upon the success of establishment of new fern plants, and, once established, a fern may well survive a succession of dry summers. The present time would seem to be a specially favourable one, therefore, to spot the ferns of Cambridgeshire, both ecclesiastic and ferroviatic. Good hunting!

N.B. All the references cited will be found in the Bibliography of the Flora of Cambridgeshire (1964) by Perring, Sell, Walters and Whitehouse.

KNAPWELL WOOD

Oliver Rackham

Grid reference TL 331607

The reduced village of Knapwell is a place of particular delight for those with an interest in Cambridgeshire's medieval past. The grassy mounds along the former main street, the ridge-and-furrow in the pastures, and the ancient pollard elms tell of a period when Knapwell

was more populous than it is now. The baby castle mound and, over the stream, the mysterious earthworks under the sombre shades of Overhall Grove add to the impression of vanished importance which is unsurpassed anywhere else in the county.

As reported elsewhere in this journal, the delights of a visit to Knapwell, whether romantic or scholarly, have recently been increased by the generosity of Dr Irwin Peck in allowing the Trust to manage Knapwell Wood as a Reserve. In appreciation of Dr Peck's public-spirited action I present this outline of recent studies in Knapwell Wood.

Knapwell Wood is about eight miles west of Cambridge and two miles south of Knapwell, next to a slight bend in the road from the village to the A45. Like most of the ancient woods of West Cambridgeshire, it lies on the edge of a slight ridge running out from the great boulder-clay plateau.

Although only 11½ acres, Knapwell Wood is much older and more interesting than most of the many woods and spinneys within sight of it. In its history it appears to be similar to Hayley Wood. Domesday Book records a small wood for fence material (*nemus ad sepes*) at

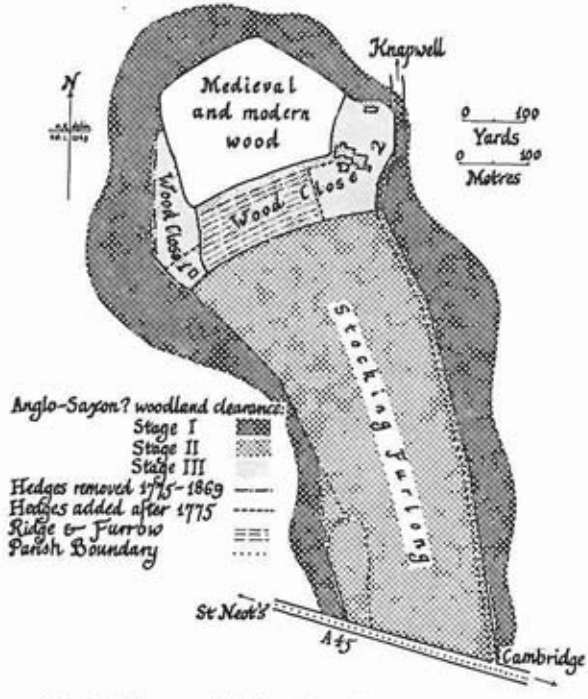

Fig. 1. Knapwell Wood and its surroundings

Knapwell. Much more interesting is the mention in the Ramsey Cartulary (1884) of an unsuccessful claim by one Audredus de Cnapwelle to part of 'the grove of Cnapwelle, and of the arable land (*terra*) which is inside the ditch (*foveam*) surrounding the grove'. This is dated between 1114 and 1130 and is thus the earliest reference to an *identifiable* wood in West Cambridgeshire. The Hundred Rolls (1279) state that the Abbot of Ramsey had a wood of '8 acres' in Knapwell; this would be roughly the same size as the modern wood*. Although an extensive search has failed to reveal any other relevant medieval documents, a lucky chance enables us to show that the Ramsey wood is indeed the same as the modern Knapwell Wood. The enclosure map of 1775 shows that—unusually—the whole of the parish consisted of common fields except for the village site and an island of 'ancient enclosures', consisting of Knapwell Wood and its wood-closes (see below), which from its rounded shape must have fitted very awkwardly among the arable strips. The Hundred Rolls show that Knapwell had only one wood (Overhall Grove is of course in Boxworth). The Cartulary description implies a wood with adjoining fields† surrounded by a ditch, which describes the present wood with its closes admirably.

Any other explanation requires *both* that the medieval wood has disappeared (in which case its site would have remained as an 'ancient enclosure') *and* that the modern wood was formed at some time before 1775 (in which case it would have an angular shape from the former fields or strips).

It is thus almost certain that Knapwell Wood has been part of the landscape for at least 850 years. The whole area, probably densely forested in Roman times, was cleared for farmland by the Anglo-Saxon settlers. Clearance went on until—probably about 1200—the remaining islands of wood acquired scarcity value and were thereafter managed for profit. In several places in West Cambridgeshire it is possible to make out stages in the reduction of a wood perpetuated in the outlines of the surrounding fields.

At Knapwell, there are three recognisable clearance stages, which must come within the Anglo-Saxon period but cannot be dated precisely. Stage I (Fig. 1) left a wood about four times as large as the present one. The area reclaimed in Stage II, although added to the common fields, is recognisable by the name Stocking Furlong‡ and

*For a discussion of the apparent discrepancy see Rackham (1968).

†A confirmatory detail is that, as pointed out by the Royal Commission on Historical Monuments (1968), the southern wood-close (now pasture) has ridge-and-furrow, proving former cultivation. Aerial photographs show that the ridges are of either the curved or the reversed-S type; this dates them before the days when ploughing had to be straight and is consistent with the site being arable in the 12th century.

‡Information kindly supplied by Dr Peck. Stocking (i.e. a place of 'stocks' or tree-stumps) is a common name in the district for a field next to a wood.

by the existence of dog's mercury, a typical woodland plant, in the hedge to the east of the road*. Stage III is a typical late clearance of small fields (originally two) from a small remaining woodland. Such wood-closes, as they are often called, were made out of many local woods (though not Hayley) and often later reverted to woodland. Being presumably private encroachments, they were not added to the system of common fields but remained 'ancient enclosures'. The large ditch to the south of the wood-close is presumably the 12th-century *fovea*, itself formerly the boundary ditch of the wood. The associated hedge contains at least 11 shrub species, and by the arguments of Hooper (1966; cf Hoskins (1967) ch. 8) must be several centuries old. It also has dog's mercury and could be the marginal vegetation of the Stage II wood.

The farm next to the wood is a common feature of the district. There is slight place-name evidence (Reaney 1943) that the inhabited site goes back to the middle ages, perhaps as a woodward's cottage.

Of the later history of the wood we know little. Analogy with other woods suggests that in the middle ages it was a valuable and intensively-managed asset (Rackham 1967). By 1869 (sale advertisement) it was a 'noted Fox Covert'. The coppicing system probably deteriorated in the 19th century, as in other woods.

Miss M. J. Banks, of Knapwell Wood Farm, tells me that the wood was clear-felled between 1918 and 1922, and that it used to contain a small number of conifers. The latter—still on the Ordnance maps although they first appear at the 1924 revision—were perhaps those on the 1869 sale plan. There have been several unsuccessful conifer plantations in the West Cambridgeshire woods, and in this case not even the stumps remain.

On the south and west sides, the wood has overgrown its original bounds slightly and has thus preserved a fine medieval boundary bank and ditch (Fig. 2). The only other earthworks are a network of shallow grips or drainage channels. These are probably quite recent and may still function—Knapwell is somewhat drier than other local woods although it shares the same heavy clay soil (for details see Pigott & Martin 1964). The rides intersect the grips in a way which suggests that the rides are more recent. They first appear on Ordnance maps at the 1924 revision.

Knapwell Wood has grown again from the stumps of the 1920 felling. It still has plants characteristic of ancient woods, such as oxlip, dog's mercury, and the hawthorn (*Crataegus oxyacanthoides*). Plants of more recently-established woods, such as sycamore, ivy (on the ground), spurge-laurel (*Daphne laureola*), Queen Anne's lace (*Anthriscus sylvestris*), and primrose are absent or local. Primroses will be discussed later.

*The road itself and its western hedge are modern.

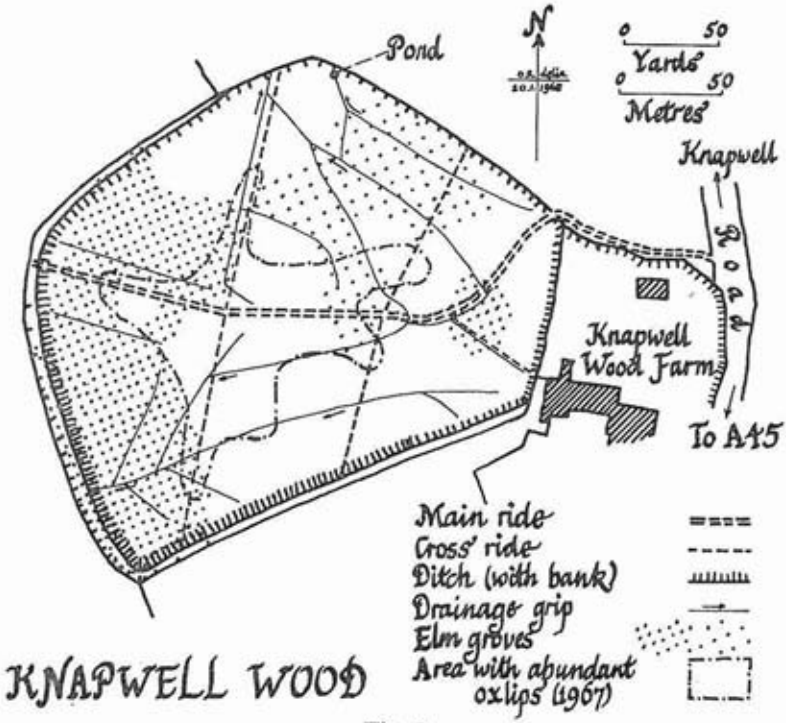

Fig. 2

Tree species are the same as in other ancient woods (though there are no aspens) but their arrangement is unusual. Hayley, for instance, has three 'storeys' or 'layers' of trees—oak and a few ash 'standards', under which are ash and maple (*Acer campestre*) 'large coppice', with hazel and hawthorn 'small coppice' below these—which result from the medieval and later system of management. Knapwell has only the middle layer: standards and small coppice are few and scattered. This results in part from the 1920 felling. Ash and maple stools have grown up into large coppice timber, as they would after a normal coppicing. Many of the stumps of the oaks have also produced pole-sized coppice trees, but most of these have not had the time, nor the forester's attention, needed to turn them into well-grown standards. It is not so clear why the small coppice should be so thin. Possibly there never was any, or perhaps it may have been deliberately eliminated in order to under-plant with conifers.

The tallest trees in the wood are elms (in the *Ulmus carpinifolia* group), which, as in other woods, grow in patches by themselves. They cover about half the wood—much more than in Hayley. They have probably greatly increased in the last 200 years, but we shall

never be certain about this as the original trees have been felled and the present ones have grown from suckers.

Knapwell contains a few patches of dense blackthorn scrub, but is on the whole very clear for so disturbed a wood. It is notable for its crab-apple trees.

This wood shows in miniature the same zonation in its ground vegetation as Hayley (Rackham 1967). In the middle is a wet area with abundant oxlips and meadowsweet. In the south is a drier area carpeted with dog's mercury. The remainder contains varying proportions of bluebells, mixed with oxlips towards the oxlip area and with mercury towards the mercury area and the edge of the wood. Oxlips in this wood have a curious tendency to grow on or near rides.

Knapwell is one of several woods containing oxlips (*Primula elatior*) with a minority of primroses (*P. vulgaris*). The relation between these species has been much studied (see especially Christy (1922) and Valentine (1948)). In this area, the primrose is not a typical species of ancient woods, but rather a plant of wood margins and hedgerows. In a number of woods, primroses can be related to encroachments of the woodland on to adjacent farmland, but at Knapwell this does not appear to apply. Meyer & Meyer (1951) found a sizeable area with primroses in Knapwell in the 1930s, though Valentine shows that there were many more oxlips even then. In 1966 and 1967 I was unable to find any primroses, though some plants still show a few primrose characters and may be hybrids. Primroses may have got into Knapwell Wood from the edge, or have been introduced in some way. They probably prospered in the disturbances after felling, but have since declined (as does either species when in a small minority in a wood) and will eventually disappear.

The soil of Knapwell Wood is more fertile than that of most boulder-clay woods, particularly in phosphate, to judge by the frequency of stinging-nettles, elderberry, and cleavers (*Galium aparine*). This could have been brought about by the dumping of rubbish from the farm, but as these plants occur well away from the farm it is likely to be due either to more phosphate in the original boulder-clay, or to the roosting of birds, or to the disturbance and bonfires of the 1920 felling.

Knapwell is thus a wood of the same type as Hayley but there are many interesting differences. In the spring it has an impressive display of massed oxlips uneaten by any marauding deer. The last 100 years have been less kind to Knapwell than to Hayley and this has resulted in a lighter woodland with more luxuriant ground vegetation, though even clear felling has not permanently destroyed the ancient woodland structure. Among the specialities of Knapwell are the oxlip-primrose situation and the large population of the hogweed,

(*Heracleum sphondylium*), mixed with its narrow-leaved variety (*var. angustifolium*).

It is obvious from this paper that much remains to be done in recording and studying this wood. Only 63 vascular plants are known but few botanists have yet been there and many species must have been overlooked. The bryophytes, fungi, and the entire animal kingdom invite attention. In thanking Dr Peck most sincerely for permitting us to manage his wood as a reserve, I suggest to members of the Trust that it will well repay their future study.

I wish to thank the staff of the Cambridge County Record Office, the County Planning Office, and the University Library, whose records I have used, and Dr I. Peck and Miss M. J. Banks for useful information.

REFERENCES

Christy, M. (1922). *Primula elatior* Jacquin: its distribution in Britain. *J. Ecol.* **10**, 200–210.

Hooper, M. D. (1966). Notes on some hedgerows in Cambridgeshire. *Nature in Cambs* **9**, 23–29.

Hoskins, W. G. (1967). Fieldwork in local history. Faber, London.

Hundred Rolls (1279). *Rotuli Hundredorum* vol. II (1818). H.M.S.O., London.

Knapwell Enclosure Map (1775). MS in County Record Office, Cambridge.

Meyer, H. & Meyer, D. (1951). The distribution of *Primula elatior* (L.) Hill. In *The study of the distribution of British plants*, (ed. J. E. Lousley), 80–81. Buncle, Arbroath.

Pigott, C. D. & Martin, M. H. (1964). Hayley Wood. *Nature in Cambs.* **7**, 23–26.

Rackham, O. (1967). The history and effects of coppicing as a woodland practice. In *The biotic effects of public pressures on the environment* (ed. E. Duffey), 82–93. Nature Conservancy (Monks' Wood Experimental Station Symposium **3**).

Rackham, O. (1968). Medieval woodland areas. *Nature in Cambs.* **11**, 22–25.

Ramsey Cartulary (1884). *Cartularium Monasterii de Rameseia* (ed. W. H. Hart & P. A. Lyons). Longmans, London.

Reaney, P. H. (1943). The Place-Names of Cambridgeshire and the Isle of Ely. English Place-Name Society **19**.

Royal Commission on Historical Monuments (1968). West Cambridgeshire. H.M.S.O., London.

Valentine, D. (1948). Studies in British Primulas. II. Ecology and taxonomy of primrose and oxlip (*Primula vulgaris* Huds. and *P. elatior* Schreb.). *New Phytol.* **47** 111–130.

CAMBRIDGESHIRE CHAROPHYTES

A supplement to A Flora of Cambridgeshire

by Bruce Ing

Introduction

For reasons of space it was not possible to include the Characeae in the recent *Flora* (Perring *et al.*, 1964) although they have been mentioned in most previous works on Cambridgeshire plants, (Ray, 1660; Martyn, 1763; Relhan, 1820; Henslow, 1829; Babington, 1860 and Evans, 1939). Cambridgeshire has long been known as an

excellent area in which to study stoneworts and apart from the authors mentioned above important work was done by A. Bennett, G. Bullock-Webster, A. Fryer, the Grove brothers and A. Shrubbs. Recent collectors include G. O. Allen, D. E. Coombe, B. Ing, L. C. Lyon, G. H. Rocke and C. West. The present paper is a collation of older work and recent collections in the light of modern views of the group.

Charophytes are green algae with specialised branching and unusual reproductive mechanisms. They are found in aquatic habitats throughout the world, being commonest in warm temperate regions. They generally inhabit neutral to slightly acid water although several species secrete a coating of lime and are therefore commoner in calcareous waters. They will not tolerate shade and are quickly killed off by stronger growing phanerogams. When ponds and ditches are periodically cleaned out charophytes are among the first plants to colonise the bare bottom. These features partly explain the previous abundance of stoneworts in the fen lodes and in clay and coprolite pits. Cessation of traditional management may have resulted in the loss of several species. It is possible that some of the plants listed below are extinct in the county but there is insufficient evidence on this point.

Structure

Chara has a *cortex* of short longitudinal filaments bound round a central stem cell which is itself equivalent in length to the internode. The cortical cells are separately vertically by *spine cells*, the row of cortex with spines being called the primary series. In a *double cortex* the primary series are separated horizontally by a row of spineless cells, the secondary series. In a *triple cortex* there are two secondary series to each primary series. The relative prominence of the primary and secondary series is of diagnostic value. The spines are also important—either well developed as in *C. major* or almost absent as in *C. globularis*. Where the stems branch are nodes, with two tiers of short, stubby filaments all round the stem. These are the *stipulodes*.

Many species of *Chara* are encrusted with calcium carbonate which renders examination of the above features difficult. It is best removed with dilute hydrochloric acid. Old material can be softened by gently boiling in dilute potassium hydroxide solution. A strong hand lens or low power binocular microscope is sufficient to distinguish the Cambridgeshire species.

In *Nitella* and *Tolypella* there are no cortex, spine cells or stipulodes and little lime. These genera are separated by the position of the reproductive organs, mode of branching and the number of cells in the terminal portion, or *dactyl*, of the branch, i.e. the portion distal to the highest node. This last is a most reliable character. The number and shape of the dactyl cells is a valuable diagnostic feature. In *Nitella* one may easily observe cytoplasmic streaming, *cyclosis*, under low power.

No description has been given here of the reproductive organs. They are objects of great beauty and unlike any other plant structures in appearance. They provide, of course, valuable characters for identification, but in the limited British flora are rarely needed except to confirm abnormal specimens. Many species are dioecious and fruits are rare; in others ripe fruit is abundant in late summer.

Charophytes are easy to collect, although a drag may be required in deep water Fresh material has a strong, offensive, smell which never really leaves a preserved specimen. Plants should be wet mounted and will usually adhere to the herbarium paper when dry. That they make attractive herbarium sheets is well demonstrated by the magnificent exsiccatae distributed by the Groves brothers and Canon

Bullock-Webster. A set may be seen in the Botany School. The standard British work is that of Groves and Bullock-Webster (1920, 1924) which is difficult to obtain. An useful introduction is given by Allen (1950) which may be obtained from the Haslemere Educational Museum, Surrey, price six shillings.

Recently a huge—and very expensive—Monograph and Iconograph has been produced by Wood and Imahori (1964, 1965) which departs radically from previous taxonomic treatments. It is unusual in that it offers two parallel systems of nomenclature, both validly published. The *macrospecies* concept treats plants with an overall structural similarity as members of an *aggregate species* which may also be roughly equivalent to an *ecospecies*. Within the macrospecies are *subspecies*, *varieties* and *forms*, exhibiting decreasing divergence from the general specific facies. Subspecies are usually based on geographical distinctions whereas varieties and forms differ in minute structure or may be ecologically separated and may represent ecotypes. The macrospecies system is cumbersome in some respects—it may necessitate the use of pentanomials—but it undoubtedly expresses the relationships of the component taxa. The second system treats the ecotypes as *microspecies* of equal rank. It is suggested that the rank of 'form' is of little taxonomic value, merely reflecting an environmental modification. In the event of discarding 'forms' the corresponding microspecies name would also disappear; in the meantime it provides an useful link with names used in older literature.

The list that follows is arranged under *macrospecies*, with full synonymy to *microspecies* names and those used in previous treatments. On the other hand the keys are designed to allow identification of *microspecies* for simplicity, the numeral following the name being the order in the list. The arrangement is the same as in Perring *et al* (1964) and the remarks on pages 31 and 32 of that work apply here.

It is interesting to compare the total of three genera and 21 microspecies in this list from a base-rich region with the three genera and 16 microspecies recorded from a predominantly upland, acid-water region—Perthshire (see Ing, 1969).

CHARACEAE

KEY TO GENERA

1 Stem with a well defined cortex	**CHARA**
— Stem entirely without cortex	2
2 Dactyls 1–2(–3)-celled	**NITELLA**
— Dactyls many-celled	**TOLYPELLA**

CHARA L.

KEY TO MICROSPECIES

1 Cortex triple (*globularis* agg.)	2
— Cortex double	5
2 Spine cells obscure	3
— Spine cells well developed	4
3 Stipulodes obscure	**C. globularis** (3a)
— Stipulodes developed in upper tier at least	**C. virgata** (3b)
4 Spine cells solitary	**C. aspera** (3c)
— Spine cells in bundles of 3 or 4	**C. curta** (3d)
5 Spine cells solitary (*vulgaris* agg.)	6
— Spine cells clustered (*hispida* agg.)	10
6 Primary cortical series more prominent	7
— Secondary cortical series more prominent	8
7 Spine cells less than half the diameter of stem	**C. contraria** (1b)
— Spine cells longer than diameter of stem	**C. hispidula** (1c)
8 Spine cells pointed, at least as long as half stem diameter	**C. vulgaris** (1a)
— Spine cells short or obscure	9
9 Spine cells short, rounded; internodes long; branches short, stout	**C. crassicaulis** (1d)
— Spine cells obscure; plant elongate; cortex missing at tips of branches	**C. longibracteata** (1e)
10 Primary cortical series more prominent; plant slender	**C. hispida** (2a)
— Secondary cortical series more prominent; plant stout	11

11 Spine cells in bunches of 3 or in horizontal pairs — **C. major** (2b)
— Spine cells in vertical pairs — **C. rudis** (2c)

1 **Chara vulgaris** L. em. R. D. Wood (all Cambridgeshire taxa are under var. *vulgaris*.)

a. f. **vulgaris** (*C. vulgaris* L.) Ray, 1660.
Once extremely common in dykes, lodes, ponds and pits but collected very rarely of late. 44, 48, 56, 57 [25, 35, 38, 45–47, 49, 55, 58, 65–68]. A common British plant, and even within the narrow limits of the modern taxon, very variable. The 'varieties' *papillata* Wallr. and *refracta* Kütz. mentioned in earlier works are not now recognised even as *formae*.

b. f. **contraria** (A.Br. ex Kütz.) R. D. Wood (*C. contraria* A.Br. ex Kütz.) H. Groves, 1881. Fens only. [47–49, 56.] Widely distributed but nowhere common.

c. f. **hispidula** (A. Br.) R. D. Wood (*C. hispidula* (A.Br.) R. D. Wood; *C. contraria* var. *hispidula* A.Br.) Coombe and West, 1949. Found in several places near Bottisham. **56**. Rare in Britain.

d. f. **crassicaulis** (Schl. ex A.Br.) R. D. Wood (*C. crassicaulis* (Schl. ex A.Br.) Kütz.; *C. vulgaris* var. *crassicaulis* Kütz.) H. and J. Groves, 1884.
Known only from Burwell Fen. [56.] Rare in Britain.

e. f. **longibracteata** (Kütz. in Reich.) H. and J. Groves (*C. longibracteata* Kütz. in Reich.; (*C. vulgaris* var. *longibracteata* Kütz.) H. and J. Groves, 1884. In fen ditches and large drains, nowhere common. Collected in recent years near Mepal and Ely. 48,58 [46, 55–57.] R. Scattered throughout Britain.

2 **Chara hispida** L. em. R. D. Wood

a. var. **hispida** f. **hispida** (*C. hispida* L. non auct.angl.; *C. aculeolata* Kütz.; *C. polyacantha* A.Br.) Babington, 1849. Originally found in many fens but in recent years only known from Quy Fen and Wicken Lode. 56 [48, 66.] W. A rare plant of peaty places, scattered across Britain.

b. var. **major** (Hartm.) R. D. Wood f. **major** (*C. major* Jartm.; *C. hispida* auct. angl. non L.) T. Martyn, 1763. Once common in the northern fens, scattered elsewhere. Few recent records. 48,56 [35, 38, 39, 44–47, 49, 55, 57, 58, 66, 68, 40, 41.] R, W. This is the robust, spiny *Chara* usually identified as *hispida*. It is common throughout the British Isles and may persist in a given locality for many years.

c. var. **major** f. **rudis** (A.Br.) R. D. Wood (*C. rudis* (A.Br.) A.Br. ex Leonh.) J. Groves and Bullock-Webster, 1924. Recorded for the county in *British Charophyta* but no locality or specimen can be traced. Rare in Britain.

3 **Chara globularis** Thuill. em. R. D. Wood.

a. var. **globularis** f. **globularis** (*C. globularis* Thuill.; *C. fragilis* auctt. incl. vars. *capillacea* and *hedwigii*.) Henslow, 1823.
In all kinds of water, common. 45, 48, 56, 57 [29, 38, 47, 58, 66.] Widespread in the British Isles, except the far north.

b. var. **virgata** (Kütz.) R. D. Wood f. **virgata** (*C. virgata* Kütz.; *C. delicatula* Ag. non Desv.) A. S. Shrubbs, 1890. Scattered across the county, one of the commonest and most static species. 55–58 [45, 47, 48, 66.] Common in the British Isles, especially in Scotland and Ireland.

c. var. **aspera** (Deth. ex Willd.) R. D. Wood f. **aspera** (*C. aspera* Deth. ex Willd.) Babington, 1849. Confined to the fens. 56, 57 [38, 48, 49.] W. Widely distributed in the British Isles, being particularly common in Scotland.

d. var. **aspera** f. **curta** (Nolte ex Kütz.) R. D. Wood (*C. curta* Nolte ex Kütz.; *C. desmacantha* Groves and Bullock-Webster) G. R. Bullock-Webster, 1896. In old pits and sides of lodes; not seen for many years. [56.] A western species, scattered across England, common in Ireland.

NITELLA Agardh

KEY TO MICROSPECIES

1 Dactyls 1-celled — 2
— Dactyls 2 or more-celled — 4
2 Plant covered in slimy mucus — **N. capillaris** (2)
— Plant quite free of mucus (*flexilis* agg.) — 3

3 Plant diffuse, slender	**N. flexilis** (1a)
— Plant with whorls of branches compacted into large heads; robust	**N. californica** (1b)
4 End cell of dactyl constricted at base	**N. mucronata** (3)
— End cell of dactyl not so constricted	5
5 Dactyls 2(–3)–celled	**N. tenuissima** (4a)
— Dactyls (3–) 4(–5)–celled	**N. ornithopoda** (4b)

1 **Nitella flexilis** (L.)Ag. em. E. D. Wood var. **flexilis**

a. f. **flexilis** (*N. flexilis* (L.) Ag.; incl. *N. opaca* Ag.) Henslow, 1831. Widely distributed in the county. 45, 55, 57 [25, 35, 47–49, 56, 58, 59.] R, W. Very common in the British Isles.

b. f. **nidifica** (Hartm. ex Wallm.) R. D. Wood (*N. californica* T. F. Allen; *N. flexilis* var. *nidifica* Wallm.) G. R. Bullock-Webster, 1896. The only certain record is from the Old Bedford River below Sutton Gault Bridge. [47.] Scattered throughout Britain, never common.

2 **Nitella syncarpa** (Thuill.) Chev. var. **capitata** (Nees) Kütz. (*N. capillaris* Krok; *N. capitata* Ag.) A. Fryer and H. and J. Groves, 1885. The only British locality is in the washes near Sutton Gault and in the Old Bedford River towards Mepal. Not collected since 1899 until refound in the same area in 1959 by G. H. Rocke (*Proc. bot. Soc. Br. Is.* **4**: 172.) 47.

3 **Nitella furcata** (Roxb. ex Bruz.) Ag. em. R. D. Wood ssp. **mucronata** (A.Br.) R. D. Wood (*N. mucronata* (A.Br.)Mig.) G. R. Bullock-Webster, 1895. The only record is from Roswell pits, Ely. [58.] Rare in Britain but also found in Bedfordshire and Hertfordshire.

4 **Nitella tenuissima** (Desv.) Kütz. em. R. D. Wood

a. ssp. **tenuissima** (*N. tenuissima* (Desv.) Kütz.) Henslow, 1826. At one time spread over an area of fenland in the centre of the county but now apparently confined to Wicken Lode. It was last seen at Wicken in 1922 and was absent when searched for in 1949. An experimental peat digging produced fertile material in July 1957 and the plants persisted for at least two more summers (Walters, 1958.) 56. W. There are few recent records from the British Isles.

b. ssp. **ornithopoda** (A.Br. in Leonh.) R. D. Wood (*N. ornithopoda* A.Br. in Leonh.) H. and J. Groves, 1882. This plant is something of a mystery as it has not been admitted to the British list although it was distributed in the Groves exsiccata, as *tenuissima* s.str. The specimen was found in Wicken Lode on 29 May 1882, and is recorded in Wood and Imahori (1965.) The dactyls are 5-celled in the Wicken material. [56.] W.

TOLYPELLA (A.Br.) A.Br.

KEY TO MICROSPECIES

1 Branches forked at tip	**T. intricata** (2a)
— Branches simple	2
2 End cell of dactyl sausage-shaped	**T. glomerata** (1)
— End cell of dactyl conical	**T. prolifera** (2b)

1 **Tolypella nidifica** (O. Mull.) A.Br. em. R. D. Wood var. **glomerata** (Desv. in Lois.) R. D. Wood (*T. glomerata* (Desv. in Lois.) Leonh.) A. Fryer, 1882. Scattered about the county, not only in the fens. As with the other species of *Tolypella* it is rarely found in the same spot in successive years. 55, 56, 64 [38, 39, 45–49, 57, 58.] R, W. Nowhere common.

2 **Tolypella intricata** (Trent. ex Roth) Leonh. em. R. D. Wood var. **intricata**

a. f. **intricata** (*T. intricata* (Trent. ex Roth)Leonh.) Relhan, 1820. Sparsely distributed, not confined to the fens. Particularly sporadic in appearance and not found recently. [35, 36, 45–48, 56, 57, 65.] Rare in Britain.

b. f. **prolifera** (Ziz ex A.Br.) R. D. Wood (*T. prolifera* (Ziz ex A.Br.)Leonh.) A. Fryer, 1882. Confined to the northern fens; not seen in recent years. [29, 38, 39, 47, 48, 57, 58.] R. Not common in the British Isles.

BIBLIOGRAPHY

Allen, G. O. 1950. *British Stoneworts (Charophyta.)* Arbroath.
Allen, G. O. 1951. Four days charophyte collecting in the Ely district. *Watsonia* **2**: 10–11.
Babington, C. C. 1860. *Flora of Cambridgeshire.* London.
Evans, A. H. 1939. *A Flora of Cambridgeshire.* (pp. 215–217.) London.
Groves, J. and Bullock-Webster, G. R. 1920 and 1924. *The British Charophyta,* Vol. I and II. London, Ray Society.
Henslow, J. S. 1829. *A Catalogue of British Plants.* Cambridge.
Ing, B. 1969. Perthshire Stoneworts. *Trans. Proc. Perthsh. Soc. nat. Sci.* **12**: (in press.)
Martyn, T. 1763. *Plantae Cantabrigienses.* London.
Perring, F. H., Sell, P. D., Walters, S. M. and Whitehouse, H. L. K. 1964. *A Flora of Cambridgeshire.* Cambridge.
Ray, J. 1660. *Catalogus plantarum circa Cantabrigiam nascientium.* Cambridge.
Relhan, R. 1820. *Flora Cantabrigiensis.* Cambridge.
Walters, S. M. 1958. *Nitella tenuissima,* a rare British Charophyte. *Proc.bot.Soc.Br.Is.* **3**: 104.
Wood, R. D. and Imahori, K. 1964 and 1965. *A Revision of the Characeae,* Vol. I and II. Weinheim.

VASCULAR PLANT RECORDS

F. H. Perring

All records are for 1968 unless otherwise stated

This has been a remarkable year for the number of interesting records of ferns reported. It is tempting to correlate this with the very wet summer.

Adiantum capillus-veneris L. Sheltered damp brick wall, Richmond Road, Cambridge 52/439598. 27.11. A. Malloch. A second naturalised locality: previously known from Old North Road station, but now gone.

Asplenium adiantum-nigrum L. Wimpole Hall. 52/336510. 28.5.66. O. Rackham. This fern is becoming commoner to the west of Cambridge. Also on old stone-work, Tydd St Giles church. 53/427165. 28.9. M.G. and S. M. Walters. Not recorded here since John Martyn over 200 years ago.

Asplenium trichomanes L. Bridge over Bourn Brook, Toft. 52/369549. 8. Camilla Huxley. Only the fourth known locality for this rare fern.

Athyrium filix-femina (L) Roth. Chippenham Fen. 52/64–69–. 19.6. F. H. Perring. A rare fern in Cambridgeshire woods.

Cystopteris fragilis (L) Bernh. Concrete platform of (disused) Old North Road station. 52/316546. 14.11. S. M. Walters. N. C. R. Nearest locality is at Barley in Hertfordshire.

Azolla filiculoides Lam. Pond by Village College, Swavesey. 52/36–68–. 1.12. P. & R. Thoday. Found at Wicken in 1967: perhaps spreading.

Ceratophyllum submersum L. Horsehoe Pond, Madingley Park. 52/391607. 14.11. R. C. Chapman. N. C. R. Two variants occur, var. *submersum* and var. *haynaldianum* (Borbas) Beck.

Agrostemma githago L. Cornfield by Devil's Dyke. nr. Burwell. 52/58–64–. 7. J. W. Clarke. Very rare nowadays.

Veronica scutellata L. Green Hills, Soham. 52/605722 8. S. M. Walters and D. Wells. Only the fourth locality known.

Centaurea solstitialis L. Isleham Fen. 52/63–76–. 11.67. B. Goodchild det. S. M. Walters. First record of this Casual since 1949.

Hieracium sublepistoides (Zahn) Druce. Railway Bank by Devil's Ditch, Dullingham. 52/63–60–. 5.6. R. J. Pankhurst det. P. D. Sell.

Hieracium trichocaulon (Dahlst.) Johans. Side of footpath from Brooklands Avenue to Long Road, by Vicar's Brook, Cambridge. 52/45–56–. 1962. J. Dalton. Confirmed 1968. S. M. Walters det. P. D. Sell. N.C.R. but an introduction.

Luzula multiflora (Retz.) Lejeune. Chippenham Fen. 52/64–69–. 20.6. F. H. Perring and S. M. Walters. Very local. Perhaps a recent introduction here.

Scirpus maritimus L. Wilbraham Fen. 52/51–58–. 7. D. Langley. First record in the south of the county.

Scirpus setaceus L. Fulbourn Fen Nature Reserve. 52/531561. 4.7. S. M. Walters. Rarely seen.

Bromus interruptus (Hack) Druce. A second locality about ¼ mile from the well-known one near Pampisford has been reported: 5 plants in a Sainfoin field 5.6. J. R. Palmer.

WEATHER NOTES FOR CAMBRIDGESHIRE 1968

J. W. Clarke

The summer of 1968 was the wettest in south-eastern England since 1931. At Swaffham Prior, 17.86 ins. of the total rainfall for the year (25.38 ins.) fell in the summer six months (April–September). Taking the year as a whole, rainfall was the highest since 1960 (28.61ins.). March and February were the driest months of the year whilst August, July and September were the wettest. This is a normal rainfall pattern for Cambridgeshire; showing the approach to the Continental type of annual rainfall distribution—dry winters and wet summers. Most of the summer rain came with winds from the North and East, although these winds usually bring fine sunny weather in summer. July and August were not only wet, but also

generally cool, sunless and gloomy. The first nine days of August had a total of only 2½ hours sunshine. Despite this, a few short warm and sunny spells occurred—30 May–2 June, 29 June–2 July and 21–24 August. June was once again the warmest month of the year. In March 72°F. was recorded on the 29th—an abnormally high temperature for the month. A thunderstorm during the night 10–11 July gave the heaviest single fall of rain (1.37 ins.) and also brought a tremendous north-easterly gale, leaving a trail of damaged crops and uprooted trees.

The winter was not cold on the whole, although the year began with heavy snow during the night 1–2 January and there were several frosty days with snow lying during the first half of January. The year ended in the same way as it began, with frost and snow in the last week of December.

Number of days over 80°F	5
Number of days over 70°F	52
Number of days with a maximum under 32°F	10
Number of days with a minimum under 32°F	71
Last air frost of the spring	19 May
First air frost of the autumn	5 November

Weather Records at Swaffham Prior 1968

Temperature °F

Month	*Mean max.*	*Mean min.*	*Highest*	*Lowest*	*Rainfall ins.*
January	41	33	53 on 15th	15 on 10th	1.59
February	38	30	45 on 1st	23 on 4th	0.69
March	51	37	72 on 29th	27 on 3rd	0.68
April	57	38	74 on 21st	23 on 8th	1.49
May	60	42	75 on 31st	32 on 19th	1.27
June	69	52	81 on 30th	41 on 1st	3.31
July	68	53	86 on 1st	42 on 7th	3.91
August	67	55	81 on 22nd	46 on 19th	4.04
September	65	53	74 on 10th	43 on 19th	3.84
October	60	51	67 on 4th	45 on 15th & 18th	1.82
November	47	41	58 on 1st	29 on 10th	1.38
December	39	34	49 on 22nd	23 on 14th	1.36
Average	55.2	43.2		Total	25.38

ADDITIONAL LIST OF TRUST MEMBERS

(December 1968)

(Joined since November 1967)

Abraham, Miss A., 22 Lovell Road, Cambridge
Adams, Dr Aileen K., Guilding Cross, Great Abington, Cambridge
Agambar, Mrs O. H., Heydon Post Office, Heydon, Royston, Herts
Aldrich, D., 42 Newton Road, Cambridge
Alexander, D. G., Reed Cottage, Leverington, Wisbech, Cambs
Allen, A. E., Manor Farm, Hildersham, Cambridge
Allen, M. J., Stuart House, Mill Lane, Cambridge
Andrews, Mr and Mrs A. G., 32 Montague Road, Cambridge
Arndt, Mrs U. W., 9 Courtyards, Little Shelford Cambridge
Austen, F. C., Whitecroft Nurseries, Meldreth, Royston, Herts
Bailey, Miss M. J. B., 28 Halifax Road, Cambridge
Bangham, Mrs R. B., 17 High Green, Great Shelford, Cambridge
Barbanell, Mr D. and Mrs A., Burwell House, Burwell, Cambridge
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Beer. C. H., 51 Ness Road, Burwell, Cambridge
Benson, C. W., 22 Greenfield Close, Stapleford, Cambridge. CB2 5BT
Billitt, Mrs N., 11 Gaul Road, March, Cambs
Bishop, Mrs S. J., The Moon & Sixpence, Reach, Cambs
Bissett, J., Folly Cottage, Whaddon, Nr Royston, Herts
Bland, Miss M., 16 Lingholme Close, Cambridge
Blofield, Mrs J., Harlequin House, Ickleton, Nr Saffron Walden, Essex
Borrup, L., 104 Cambridge Road, Great Shelford, Cambridge
Boswell, Dr Mildred, Withleigh, Hildersham, Cambridge
Bown, Mr and Mrs, J.P., 19 Luard Road, Cambridge
Bragg, D. W., 34 Victoria Park, Cambridge
Brett Davies, Dr P., Flat D, 32 Selwyn Gardens, Cambridge
Brian, Professor, P. W., Whitewalls, Kingston, Cambridge
Brighty, R. H., Langwood, off Norwood Road, March, Cambs
Broad, Professor C. D., Trinity College, Cambridge
Brown, Miss P. J., The Pightle, Newnham Walk, Cambridge
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Bunting, Miss M. G., Moorlands, The Moor, Melbourn, Royston, Herts
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Cahan, Miss T., 3 Kingfisher Court, Halifax Road, Cambridge
Cambridge Rambling Club, 16 Bridge Close, Great Shelford, Cambridge
Cameron. Wilson, Dr J., Jesus College, Cambridge
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Chinner, G. A., Downing College, Cambridge
Christie, Mrs A. P., King's Orchard, King's Mill Lane Great Shelford, Cambridge
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Clark, Miss M. E., 3 Lilac Close, Haslingfield, Cambridge
Claye, Hugh, 5 Fendon Road, Cambridge
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Cosslett, V. E., 1 Long Road, Cambridge
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Golding, B., Botany School, Cambridge
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Sir Harry Smith School, Eastrea Road, Whittlesey, Peterborough
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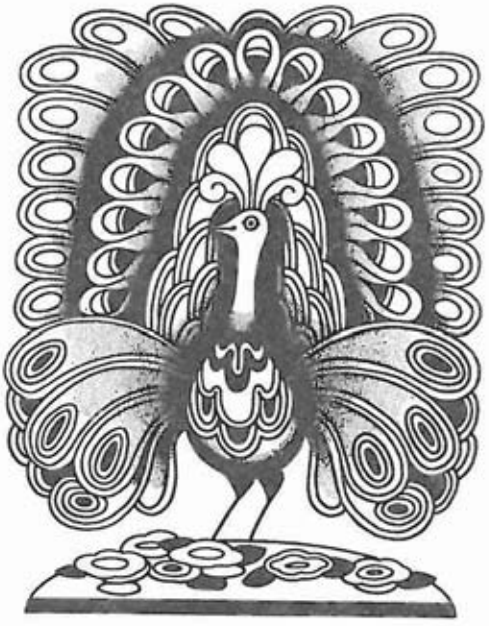

Joshua Taylor

Cambridge

Why the Trust has been formed

The countryside is changing rapidly before our eyes. Some change is, of course, inevitable; but nearly all the alteration is tending towards a loss of variety, interest and beauty, and the destruction of areas still in a natural and semi-natural state. There is a very urgent need for a local organisation to take action, before it is too late, to safeguard what remains, and to encourage the intelligent conservation of nature.

Aims of the Trust

To record and study the chief places of natural interest history in Cambridgeshire and the Isle of Ely. This interest is not confined to botany and zoology, but should include geology, archaeology and local history.

To protect these places if they are threatened.

To acquire and administer any such place as a Local Nature Reserve, if this action is the most appropriate method for conservation.

To co-operate with other local and national bodies with interests in natural history and nature conservation.

To encourage interest and understanding for an intelligent policy of nature conservation, which should not run counter to the best interests of agriculture, forestry, sport, and other rural industries and occupations.

Membership

Minimum subscriptions: Ordinary £1 p.a., Life £20, Family Membership (husband, wife and any children under 12) 30/–, Corporate Membership (Schools etc.) £1 p.a., Students 10/– p.a. Full particulars obtainable from the Secretary, 1 Brookside, Cambridge,