

BRYOPHYTE SITE REGISTER

for

HUNTINGDONSHIRE

Prepared for the Nature Conservancy Council by

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- } held in CSD Master Set, Peterborough.

INTRODUCTION

Huntingdonshire has not been extensively studied bryologically. The earliest record comes from a single specimen of Thamnobryum alopecurum in W Skrimshire's herbarium at Wisbech, collected in July 1794. There is a handful of records from the 19th and early 20th centuries but the bulk of the recording has taken place since 1950.

Perhaps understandably, the county seems to have held little attraction for Cambridge botanists, except for some excursions in recent years led by Dr H L K Whitehouse, and the main body of bryological knowledge on the county, such as it is, was collected together by two local workers: J L Gilbert in the 1950s and Dr A D Horrill in the 1960s. The latter achieved more systematic coverage by introducing 10 km grid square recording, and published his "Preliminary Account of the Bryophyte Flora of Huntingdonshire" in 1973.

The aim of the current study is to bring together data on the distribution of bryophyte species in the county so as provisionally to identify important localities for bryophytes and to clarify the present state of our knowledge on bryophyte distribution.

A) The county of Huntingdonshire

The area covered in this report is the old (pre-1974) administrative county of Huntingdonshire: ie Watsonian vice-county 31. This is now part of the administrative county of Cambridgeshire, but will be referred to as Huntingdonshire in this report. The area of the county is c. 930 km² (c. 359 square miles) and the topography is relatively simple. To the north-east, less than 10 m above sea level, is the Fenland Basin with its associated peat deposits. This region is bounded to the south and west by a relatively steep slope which marks the edge of the Oxford clay deposits which cover the remainder of the county. This rises to a maximum altitude of c. 80 m towards the west of the county in gently undulating countryside.

The boulder clay is quite calcareous, often containing chalk fragments. The calcareous nature of the substrate is even more marked where disturbance has taken place, as in road and railway cuttings.

In the south of the county the boulder clay is cut by the valley of the River Great Ouse, where there are extensive deposits of sand and gravel. These have been worked to supply the building industry, resulting in many disused water-filled pits in this part of the county.

There are no rocky substrates, and only man-made habitats exist for saxicolous bryophytes. In the north-west of the county the Northamptonshire limestone, quarried a few miles to the north, provides a calcareous rock habitat on buildings and walls.

Climatically Huntingdonshire is one of the most continental areas of the British Isles. The mean rainfall for the years 1964-1972 at Monks Wood was 50.9 cm (20.05 in). Rainfall is greatest in the summer, and total wet days are below 120 per year, on average (Steele & Welch, 1973). Temperatures in the area reach a mean July value of 16.7°C (c. 62°F) and a January mean of 3.9°C (c. 39°F).

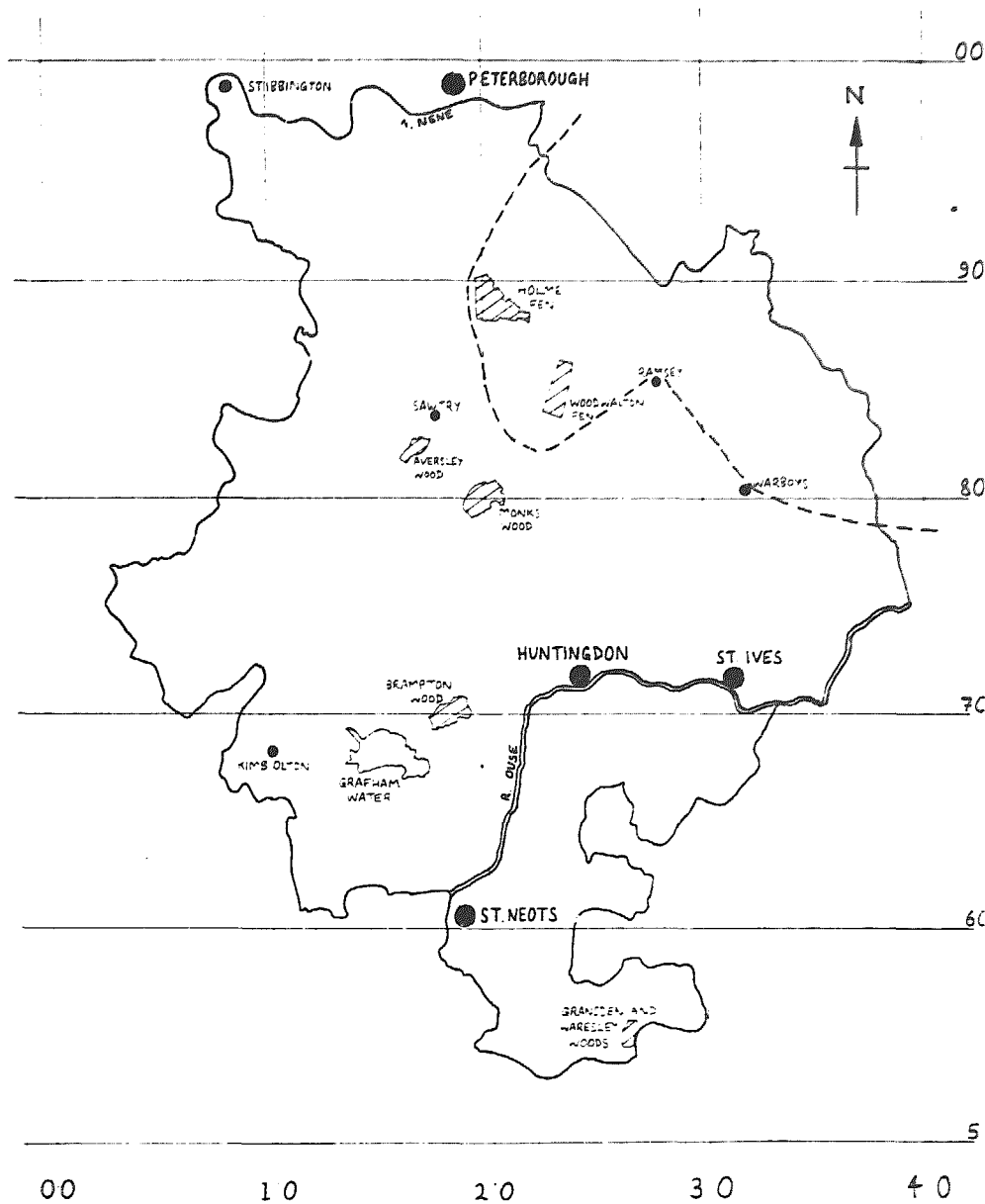
The county has been greatly altered by man's activities. The great forest that covered most of the boulder clay was progressively cleared so that now only fragments remain. Large areas of natural vegetation were destroyed when the Fens were drained, a process culminating in the draining of Whittlesea Mere in the middle of the 19th century. The former Fens are now almost entirely agricultural land.

Air pollution, is high enough to be detrimental to lichens and to sensitive bryophytes. Water pollution by agricultural fertilizers is also important, and eutrophication of ground water is detrimental to the growth of Sphagnum, and probably to other bryophytes.

Bryologically, the continental climate and limited variety of habitats make Huntingdonshire one of the least exciting of counties. Nevertheless, further exploration is needed to assess its true status.

Vice-county 31: Huntingdonshire.

----- Approx. limit of fenland peat.



B) Sources of information

1. Dr A D Horrill's Huntingdonshire bryophyte records. This is a compilation of Horrill's records, and those of Gilbert and other bryologists who have worked locally. Most of the records are from the 1950s and 1960s. Some historical records are also included. These records provide the basis for Horrill's publication on the local bryophyte flora (1973).
2. "A Preliminary Account of the Bryophyte Flora of Huntingdonshire" - Dr A D Horrill (1973). This is the only publication on bryophyte distribution in Huntingdonshire. It gives the distribution of bryophytes in the county by 10 km squares. There is also much additional useful information.
3. Huntingdonshire bryophyte records. Published in the Annual Report of the Huntingdonshire Fauna and Flora Society. 1948 to 1961 by J L Gilbert, and thereafter by Dr A D Horrill and Dr C Sargent.
4. Dr H L K Whitehouse's diaries and Cambridge Botany School excursions. Dr Whitehouse has led several excursions to Huntingdonshire since 1950, mainly to classic sites such as Monks Wood and Woodwalton Fen, resulting in quite a substantial body of records. There is some overlap between this source of data and the previous two sources.
5. NCC lists for SSSIs. Very few records.
6. Miscellaneous lists and recent records.

C) Data processing

Bryophyte names have been assigned numbers for computer use and numerical and alphabetical lists of names and synonyms are available. Nomenclature follows Corley and Hill (1981) with names from Corley et al (1981), where they differ, as synonyms. The numbers used correspond with those used on field recording cards.

Data were transferred from manuscript to record cards (field cards for locality lists, "pink" single species cards for single records). Punch cards were used for input to the computer. A standardized list of locality names was produced, and the records edited appropriately. A numbered list of bryophyte recorders was also produced.

The data were sorted by computer and printed out in two principal forms:

1. Locality lists. (Appendix 1) These give all records for each locality name, with grid reference, date, recorder and source (field, herbarium or literature). In the case of the latter two a source code gives further details (see literature sources and herbarium abbreviations, Appendix 3, Listings 8 and 9).
2. Species lists. (Appendix 2) All records are given for each species, with the above details.

Further listings (Appendix 3) were then produced from these data:

3. Locally and nationally rare taxa. Taxa regarded as "rare" (see Assessment of sites, 2. Locally or nationally rare taxa) are listed in numerical order.
 - a) Taxa "rare" in Huntingdonshire.
 - b) Taxa "rare" in Huntingdonshire and Cambridgeshire.
 - c) Huntingdonshire taxa "rare" nationally.
4. Taxa not recently recorded in Huntingdonshire. Those taxa that have not been recorded in the county since 1950 are given, with the date on which they were last seen.
5. Huntingdonshire sites not surveyed for bryophytes.
 - a) SSSIs.
 - b) Beds. & Hunts. Wildlife Trust Reserves.
 - c) Larger deciduous woods.
 - d) Other potentially interesting sites.
6. Number of 10 km squares from which each taxon has been recorded.
7. Number of taxa recorded per 10 km square.

8. Literature sources. Where records were taken from literature sources the source received a code number for use in locality and species listings. The literature sources are given in numerical order.

9. Herbarium abbreviations. Where records were derived from herbarium specimens, the herbarium was given a standard abbreviation for use in locality and species listings.

10. Bryophyte recorders. Each bryophyte recorder, or group of recorders, received a code number. This listing is in numerical order.

11. Taxa found in neighbouring vice-counties yet to be found in Huntingdonshire (vc 31). These taxa are listed in numerical order. The neighbouring vice-counties in which they occur (29, 30, 32) according to Corley and Hill (1981) are indicated after each taxon. The vice-county number is in parentheses when the taxon has not been recorded
for 50 years.

- a) Likely to occur in vc 31.
- b) Possibly in vc 31.
- c) Calcicolous taxa that could be present on walls, gravestones, road embankments and other suitable man-made habitats. Otherwise unlikely to be found.
- d) Unlikely to occur in vc 31.

12. Sites of Special Scientific Interest (SSSIs). Species lists were produced for each SSSI for which data was available, and the SSSIs were listed with the number of taxa recorded at each site. SSSIs for which there were no records were listed separately (see Appendix 3 Listing 5).

D) Assessment of sites

The scoring system developed for the Bryophyte Site Register for Cambridgeshire (Newton, 1981) was used. The criteria used were:

1. Number of taxa recorded at the site
2. Presence of rarities, either local or national
3. Size of the site
4. Nature Reserve or other "protected" status
5. History of recording or study

1. Number of taxa recorded

Seven classes were used, and scored as follows:

Number of taxa	Score
1-14	2
15-29	4
30-44	6
45-59	8
60-74	10
75-89	12
90+	14

Only "recent" records were counted, that is those made since 1950. Suspected introductions were excluded, as were taxa thought to be extinct because their only known locality has been destroyed since the last record.

2. Locally or nationally rare taxa

Taxa were regarded as "locally rare" if they have been recorded "recently" (ie since 1950) in three or fewer localities in Huntingdonshire as covered by this report. Large sites, such as Woodwalton Fen, were regarded as one locality even though the taxon had been recorded at several points within the site. "Locally rare" taxa are given in Appendix 3, Listing 3. Two listings were made for locally rare taxa: one for Huntingdonshire alone and the other for Huntingdonshire and Cambridgeshire together. The latter was included because it was thought to give a more realistic assessment of "local rarity" in view of the paucity of Huntingdonshire bryophyte records.

Taxa were regarded as "nationally rare" if they had been recorded in 10 or fewer vice-counties by September 1985 (data obtained from Corley and Hill 1981, 1982, 1983, 1984, 1985). Only "recent" records were counted. "Nationally rare" taxa are given in Appendix 3, Listing 3. All records for "Nationally rare" taxa are given on p 37.

The following scores were assigned to each taxon recently recorded:

Rarity	Score
"Locally rare"	1
"Nationally rare"	2

3. Size of the site

Four size classes were used. "Small" sites were defined as areas under one hectare (2.4 acres). "Medium" sites were between one and 20 hectares (2.4 - 48 acres) while "Large" sites were those of 20 hectares and over. A fourth class was used for "Undefinable" sites - for example "Huntingdon" - where it was not possible to determine where the records related to.

Scoring was as follows:

Size class	Score
Undefinable	0
Small	0
Medium	1
Large	2

4. Nature Reserves or with other "protected" status

All sites owned by the Beds. & Hunts. Wildlife Trust or subject to a management agreement with the Trust were regarded as Nature Reserves. The Woodland Trust also has a Reserve in the county.

Sites owned by the Church were regarded as having a sufficiently stable management to be "protected".

"Vulnerable" sites included all areas in private ownership or possibly subject to potentially damaging influences.

These categories were scored as follows:

Site category	Score
Vulnerable	0
Protected	1
Nature Reserve	2

5. History of recording

"Historical" records were taken as those dating from before 1950. They were divided into two categories - 1900 to 1949 and pre 1900.

Date category	Score
"Recent" (1950-present)	0
1900 - 1949	1
pre 1900	2

Each site received only one score for "historical" records eg a site with several taxa in each category of "historical" records would score 2 points.

SITE DESCRIPTIONS

All localities were given an evaluation score using the system described above, and ranked according to this score. Large sites, such as Woodwalton Fen, were scored as one locality although record-referred to a number of named points within the site. The first two elements of the score (number of species and rare taxa) carried most weight, while the other three elements (size of site, status, history of recording) earned a maximum of six points together. Sites with a good species list and with rare taxa present therefore produced high totals, sites with few species recorded and no known rarities produced low totals. The relative bryological importance of the sites, as far as it is known at present, could thereby be assessed.

The sites were divided into four main categories using the site evaluation score:

- A) Important sites
- B) Sites of secondary importance
- C) Sites of tertiary importance
- D) Individual records and short lists

A) Important sites

Score 17-56

These sites have good species lists with 57 or more species recorded, and contain species which are locally, or even nationally rare. They are large sites, and all are Nature Reserves. The three National Nature Reserves have a history of recording.

Inclusion of a site in this category does not mean that it is completely known - the species lists may relate to only part of the site, as at Waresley Wood. The designation of "Important site" also only applies in the context of the vice-county of Huntingdonshire and indicates that the site is known to be species rich - it does not imply that it is the best site of its kind in the county, as other, lesser known, sites may prove to be better with further recording (though this is not likely in the cases of Woodwalton Fen and Holme Fen!).

The sites included in this category represent boulder clay woodland and fen. Other major habitats are not represented (neutral/calcareous grassland, gravel pits, parkland).

There are two scores given for rare taxa (and therefore two totals) for each Category A site. The first score is arrived at by treating all taxa that are recorded in three or fewer Huntingdonshire (vc 31) sites as locally rare. As so few Huntingdonshire sites have been visited, but some of these Category A sites have been visited many times by bryologists, this gives an artificially high score to these sites. Therefore a second figure is also included. This is arrived at by treating all taxa that are recorded in three or fewer Huntingdonshire and Cambridgeshire (vc 29) sites as locally rare. It is thought that this gives a more realistic estimation of the true value of the Huntingdonshire Category A sites.

A) Important sites

Site nam.

Site evaluation
(See Assessment of Sites, p 9)

	1	2	3	4	5	Total
Aversley Wood SSSI	8	11/9	2	2	0	23/21
Holme Fen NNR	12	28/14	2	2	1	45/31
Monks Wood NNR	14	37/10	2	2	1	56/29
Waresley Wood SSSI	12	11/1	2	2	0	27/17
Woodwalton Fen NNR	12	25/6	2	2	1	42/23

Aversley Wood SSSI

County: Huntingdonshire, vice-county 31
 Grid ref. TL 15-81-
 Area 60 ha (148.3 acres)
 Altitude 20-50 m

Owners: The Woodland Trust

Status: SSSI, Woodland Trust Reserve

Site description

Aversley Wood lies about a mile south of Sawtry and west of the A1. It is ancient in origin, some parts having been under woodland since before the Middle Ages and other parts, where the ground still shows ridge and furrow, having developed on a site which was probably cultivated until around 1350.

The wood, on a heavy boulder clay soil, is of the ash-maple type, and is structurally a coppice with standards dominated by oak, ash and field maple. Some areas are dominated by elm.

There are two ponds in the wood, a small one in the south corner and a larger one in the north. A stream runs through the wood in a shallow valley, and the ground in this area is much wetter than elsewhere.

The wood is owned by the Woodland Trust and managed for wildlife.

Bryological interest

The species list consists of 57 taxa including many species typical of lowland boulder clay woodland, as well as several species uncommon in this part of the country, and one national rarity.

Of particular interest are:

Frullania dilatata This species is common in many parts of the country but has only been found in three Huntingdonshire sites.

Frullania tamarisci Aversley Wood is the only known locality in Huntingdonshire for this predominantly western species.

Clota crispa One of only two Huntingdonshire records for this species.

Dicranum tauricum On the trunk of an old oak tree. This species appears to be spreading in Britain, but this is its only known locality in Huntingdonshire.

Platygyrium repens A national rarity, this plant has been found in ten vice-counties, scattered from Bristol to Edinburgh. Aversley Wood is one of three known Huntingdonshire localities for the plant.

Hypnum lindbergii Growing in damp woodland rides. One of three Huntingdonshire sites for this widespread but infrequent plant.

Also of interest are:

Plagiomnium rostratum Scarce in Huntingdonshire.

Plagiothecium succulentum Scarce in Huntingdonshire

Plagiothecium undulatum The only Huntingdonshire record, but not seen since 1961.

Ptilinopus porelloides

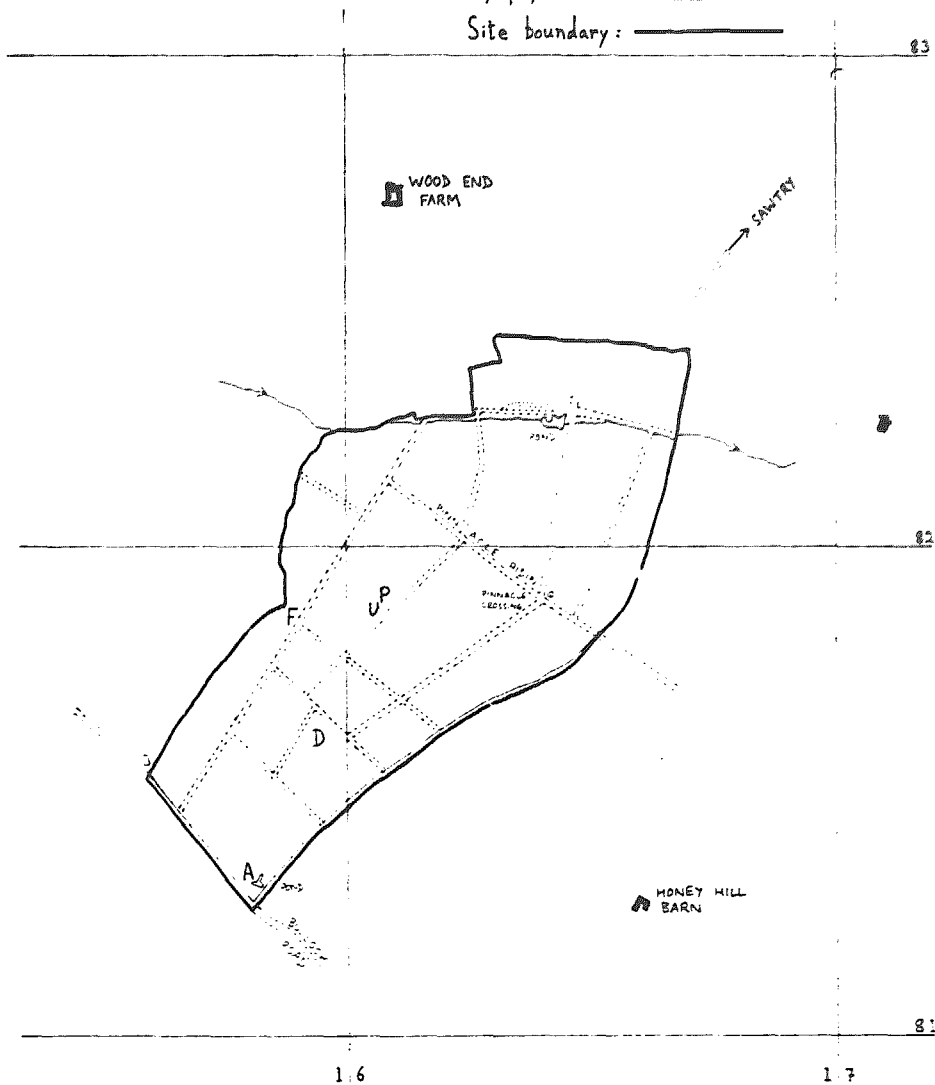
More scarce in Huntingdonshire than the related P. asplenioides, but very common in western Britain. In ditches.

Ceratopogon sp.Conservation

As the site is a Woodland Trust Reserve, and is managed for nature conservation, there is little threat to the bryophyte flora. The species list seems certain to increase with further survey work. The wetter areas, and the areas near the ponds, would probably repay careful exploration.

Aversley Wood SSSI : sketch map to show
bryophyte localities.

Site boundary: —————



- F: *Frullania tamarisci*.
 P: *Platygyrium repens*.
 U: *Ulota crispa*.
 D: *Dicranum tauricum*.
 A: *Amblystegium riparium*.

600 m

Holme Fen NNR

County Huntingdonshire, vice-county 31
 Grid ref. TL19-89-
 TL20-89-
 Area 259 ha (640 acres)
 Altitude 0 m

Owners: Nature Conservancy Council

Status: NNR, SSSI

Site description

Holme Fen is considered to be the finest area of woodland on fen peat in lowland Britain. Before 1850 the area now covered by the reserve was the south-west shore of the now drained Whittlesea Mere, a lake of some 1500 acres. The mere was drained in 1851 and the area cultivated until the 1880s, when it reverted to pasture. Later it was used as a game covert, and birch, bracken and bramble were planted for pheasant cover.

Birch is now the dominant tree (Betula pendula and B. pubescens), and the former vegetation is still represented in some areas by Sphagnum spp., Cladium mariscus (saw sedge), Calluna vulgaris (heather) and Myrica gale (sweet gale).

It was declared a NNR in 1952.

Bryological interest

The Fen is notable chiefly for the acid conditions around the Decoy (now excavated and known as Banks' Mere), which are comparable to similar areas at Wicken Fen in Cambridgeshire - the Sphagnum lists for Wicken Fen and Holme Fen are identical. The characteristic bryophytes of this area were first noted in the mid 1950s, and several excursions by bryologists have been made since then, the most recent extensive survey being that of Dr C Sargent in 1983.

Species found in the acid conditions include:

Aulacomnium palustre
Drepanocladus aduncus
Calliergon cordifolium
Sphagnum fimbriaum
Sphagnum palustre
Sphagnum recurvum var. mucronatum
Sphagnum squarrosum
Sphagnum subnitens
Aneura pinguis
Riccia fluitans

Also in this area, and elsewhere on the fen where exposed peat surfaces occur, are the following species:

Campylopus introflexus
Campylopus pyriformis
Campylopus paradoxus

Leucobryum glaucum
Polytrichum juniperinum
Polytrichum commune
Polytrichum longisetum
Polytrichum piliferum
Cephalozia bicuspidata
Cephaloziella divaricata

Not seen since 1962.

Other interesting species on the Fen include:

Hypnum jutlandicum
Bryum gemmiferum
Physcomitrella patens
Plagiothecium ruthei

Decoy, amongst Juncus and
Phragmites.

Chiloscyphus polyanthos
Riccardia multifida
Riccardia chamedryfolia

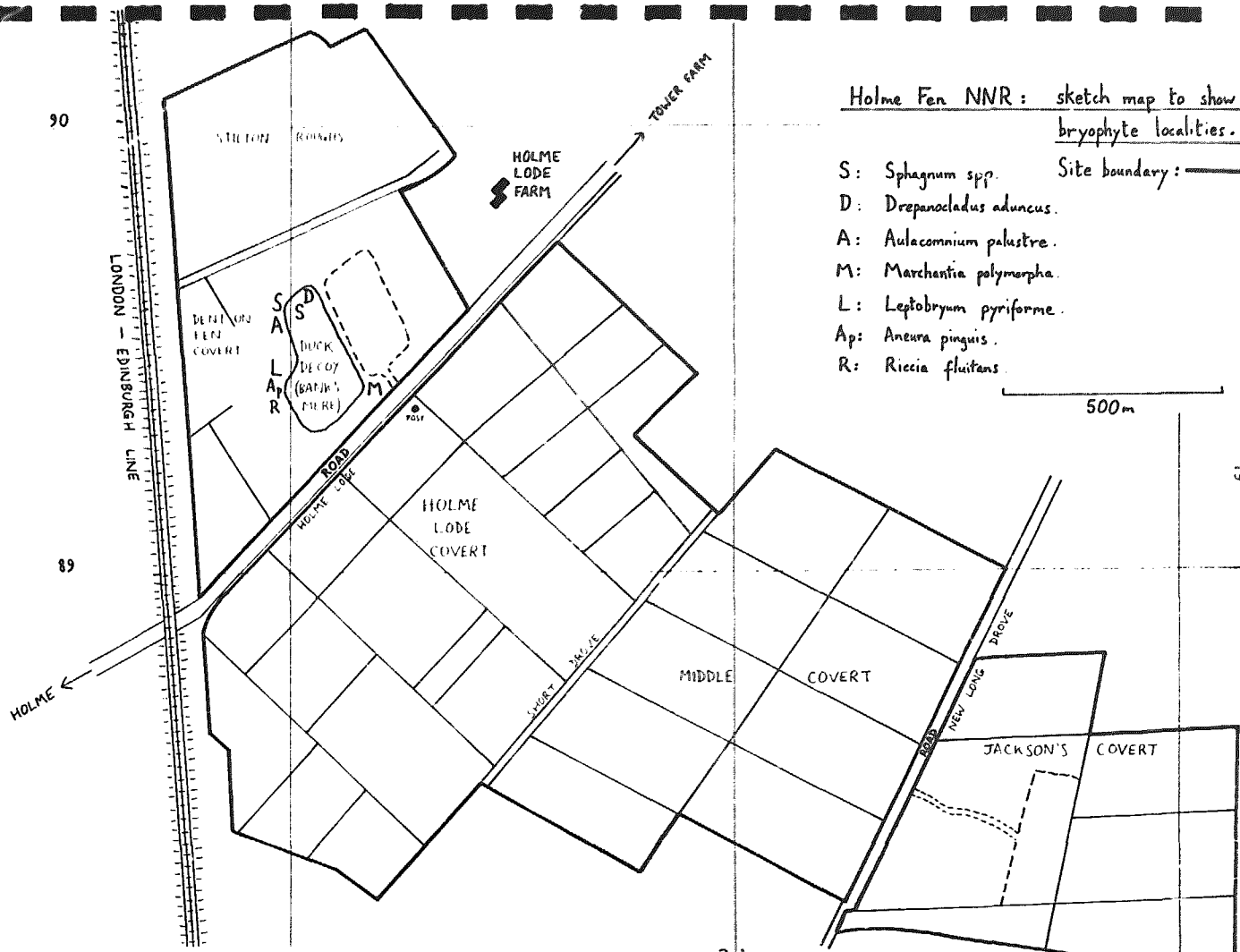
In ditches.
 In ditches.
 In ditches.

None of the above species is common in the county, all having been recorded from three or fewer sites, and many are at their only known Huntingdonshire locality.

Conservation

The Fen has protected status as a National Nature Reserve. The continuing presence of the sphagna, and the associated plants, depends on the site not drying out, as has happened in parts of Wicken Fen. This site seems less susceptible to desiccation however.

Many other species rely on a substrate of bare peat, so this should be maintained by cutting where possible.



Holme Fen NNR: sketch map to show bryophyte localities.

- Site boundary: ———
- S: *Sphagnum* spp.
 - D: *Drepanocladus aduncus*.
 - A: *Aulacomnium palustre*.
 - M: *Marchentia polymorpha*.
 - L: *Leptobryum pyriforme*.
 - Ap: *Aneura pinguis*.
 - R: *Riccia fluitans*.

500m

90

89

LONDON - EDINBURGH LINE

STILTON FIELDS

DEER ORZ FEN COVERT

HOLME LODE FARM

TOWER FARM

S
A
L
R
DUCK DECOY (BARON'S POND)

POST

HOLME LODE COVERT

SHORT BRIDGE

MIDDLE COVERT

COVERT

JACKSON'S COVERT

COVERT

ROAD NEW LONG BRIDGE

HOLME

Monks Wood NNR

County Huntingdonshire, vice-county 31

Grid ref. TL 19-79-

TL 19-80-

TL 20-79-

TL 20-80-

Area 169.8 ha (419.5 acres)

Altitude 30 m

Owners: Nature Conservancy Council

Status: NNR, SSSI

Site description

Monks Wood has been a National Nature Reserve since 1953, and is considered to be one of the most important lowland woods in Britain. Substantially clear-felled in the 1920s, it has regenerated and is now a high forest of the ash-maple type with stands of oak and elm. It has a rich shrub layer and ground flora. The substrate is boulder clay.

The wood is ancient in origin, being a remnant of the once extensive forest which covered this part of lowland Britain.

The site includes a variety of additional habitats such as ponds, streams, grassland and woodland rides all of which add to the wood's diversity.

Bryological interest

This is undoubtedly the most extensively bryologised site in vc 31, and the species list is long. Most of the standard lowland boulder clay woodland species are represented here, as well as several plants unusual for this part of the country, and one national rarity.

Of particular interest are:

Brachythecium rivulare By stream in south-west of wood. The only known site in Huntingdonshire.

Campylium stellatum var. protensum In woodland ride. This plant is also at its only known Huntingdonshire locality.

Cephalozia lunulifolia On tree stumps. The only known locality for this plant in Huntingdonshire.

Ulota crispa On tree near Barrow Ride. One of two known Huntingdonshire localities for this species.

Platygyrium repens On ash trees near New Ditch in north of wood and also on ash trees near ponds in the south-west part of the wood. A national rarity, this moss has so far been found in ten vice-counties scattered from Bristol to Edinburgh. It has been found in two other Huntingdonshire woods. 1986: Frequent & locally abundant in Wood. Mainly on fallen branches.

Pellia neesiana On wet ground by stream in south-west of wood. This is the only known site in the county for this liverwort, which is more common in wet flushes in the west of Britain. The Monks Wood specimen was at first mistaken for P. epiphylla.

Ptilidium pulcherrimum On hawthorn by a cleared area near New Ditch in the northern part of the wood. Occurring here at its only known locality in Huntingdonshire.

Loganeta caerifolia Found at base of field maple (1986) in wet part of wood, with Dicranum scoparium. New v.c. record.

Autocomaia palustris (1986) Abundant in corner of East Field, Otford's Manor only from 18thm Fen.

Other species of interest include:

Anomodon viticulosus
Cirriphyllum crassinervium
Drepanocladus aduncus
Fissidens viridulus
Homalia trichomanoides
Neckera complanata
Pleurozium schreberi
Physcomitrella patens
Pottia starkeana ssp. minutula
Rhytidiadelphus triquetrus
Tetraphis pellucida
Zygodon viridissimus
Chiloscyphus pallescens
Radula complanata
Porella platyphylla

Just south-west of the wood is a field that was visited by a party of bryologists in 1967 and yielded several interesting finds, principally of ephemeral species.

These included:

Acaulon muticum Scattered throughout Great Britain, this tiny and elusive species is nowhere common. It is the only Huntingdonshire record.

Ephemerum serratum var. minutissimum

Funaria fascicularis The only Huntingdonshire record for this occasional species.

Physcomitrium pyriforme This moss is also at its only Huntingdonshire locality.

Weissia controversa Also the only record in Huntingdonshire.

Weissia longifolia One of two Huntingdonshire records.

Weissia longifolia var. angustifolia One of two Huntingdonshire records.

Weissia rostellata An uncommon species, and at its only Huntingdonshire locality.

Weissia squarrosa Also at its only known locality in Huntingdonshire.

No further survey work has been carried out at or near this arable site since 1967 and it is not known whether any of the taxa listed survive there.

Conservation

The site is a National Nature Reserve and most of the typical woodland species are not under threat. However, wetter areas such as the Pellia neesiana site should be kept under observation, and sites of the Platygyrium and Ptilidium, which consist of one or a few trees, should be given special protection. In 1977 the northern Platygyrium site consisted of a thicket of trees and bushes. Unfortunately these were cleared, and in 1980 it appeared to be confined to rather moribund patches on only two trees, where its survival was deemed "precarious". Now (1985) it seems to be recovering, and on at least one tree forms an extensive growth. This illustrates the threats that can endanger inconspicuous plants such as bryophytes even in a NNF.

The ephemeral species depend on the provision of disturbed ground. An ideal habitat is provided by stubble fields which are not ploughed until the spring.

MONKS WOOD N.N.F.

Nature Conservancy Council.

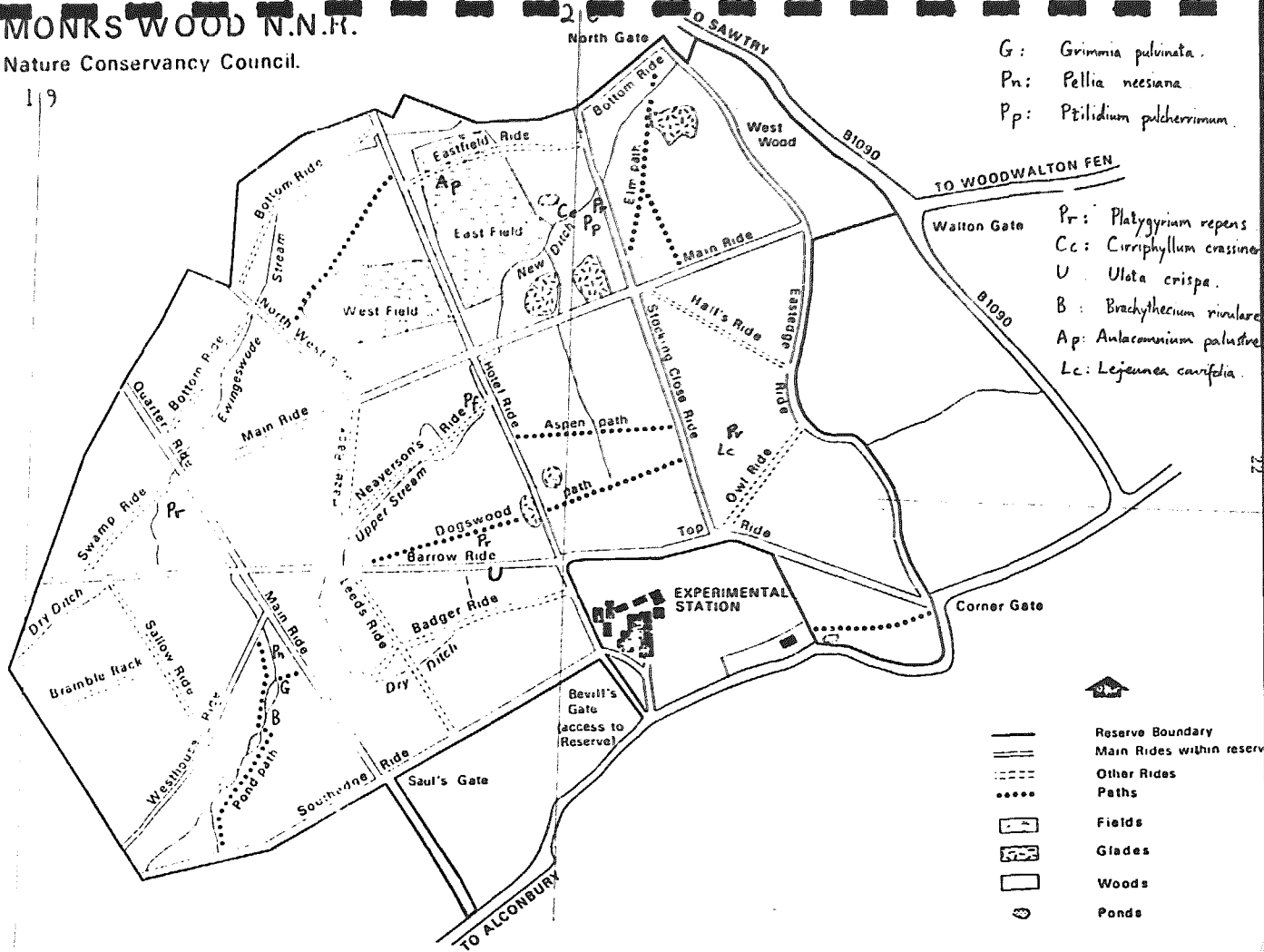
19

20

80

- G: *Grimmia pulvinata*.
- Pn: *Pellia neesiana*.
- Pp: *Ptilidium pulcherrimum*.

- Pr: *Platygyrium repens*.
- Cc: *Cirriphyllum crassine*.
- U: *Ulota crispa*.
- B: *Brachythecium rivulare*.
- Ap: *Anacamnum palustre*.
- Lc: *Lejeunea carmelita*.



- Reserve Boundary
- Main Rides within reserve
- Other Rides
- Paths
- Fields
- Glades
- Woods
- Ponds

Waresley Wood SSSI

County Huntingdonshire, vice-county 31
 Grid ref. TL26-54-
 Area 22.9 ha (57 acres)
 Altitude 60 m

Owners: Beds. and Hunts. Wildlife Trust
 Miss Colbourne
 Clare College, Cambridge

Status: SSSI, Nature Reserve

Site description

This site consists of two woods, Gransden and Waresley. It is an example of lowland boulder clay woodland with a central area of lower greensand. The principal trees are oak, ash and field maple. The two woods are joined, the boundary being Dean Brook, around which the lower greensand comes to the surface, providing a more acidic habitat than the rather calcareous boulder clay parts of the woods.

Gransden Wood, the northernmost of the two, is only partially within the reserve boundary. The remainder is privately owned and has not been surveyed for bryophytes.

Gransden and Waresley Woods are both examples of ancient woodland, and important wildlife sites.

Bryological interest

Many common boulder clay woodland species have been recorded, and also, particularly on the lower greensand, some species associated with bare ground.

Of particular note are:

Lepidozia reptans On a decaying stump in Gransden Wood. Common in wetter parts of the British Isles, this is the only confirmed Huntingdonshire locality for this liverwort, although other sites have apparently been found.

Hypnum lindbergii Amongst grass in Howard Ride. This moss is generally distributed over the British Isles but is not common. This is one of three Huntingdonshire sites for it.

Rhynchostegium riparioides Only four Huntingdonshire records exist for this generally common moss of running water, three of them from Gransden and Waresley Woods.

Physcomitrella patens In a swampy ride in Gransden Wood. This ephemeral moss has been recorded from only three sites in the county.

Pohlia wahlenbergii On disturbed clay soil in rides in Waresley Wood. This species is at its only known locality in Huntingdonshire.

Other species include:

Anomodon viticulosus

Dicranella schreberana

Ephemerum serratum var. minutissimum

Homalia trichomanoides

Neckera complanata

Rhytidiadelphus triquetrus

Tetraphis pellucida

Nearby stubble fields have yielded some interesting ephemeral species, including Bryum ruderale, found in only one other Huntingdonshire site, and Riccia glauca and Riccia sorocarpa, both of which are at their only known Huntingdonshire localities.

Conservation

The conservation of most of the woodland species seems assured, as the site is a Nature Reserve. The continuing presence of decaying wood is important for Lepidozia reptans, Tetraphis pellucida and other species.

The survival of the ephemeral species relies on the presence of bare ground. Certain areas should not be allowed to become overgrown, particularly on the greensand near the stream.

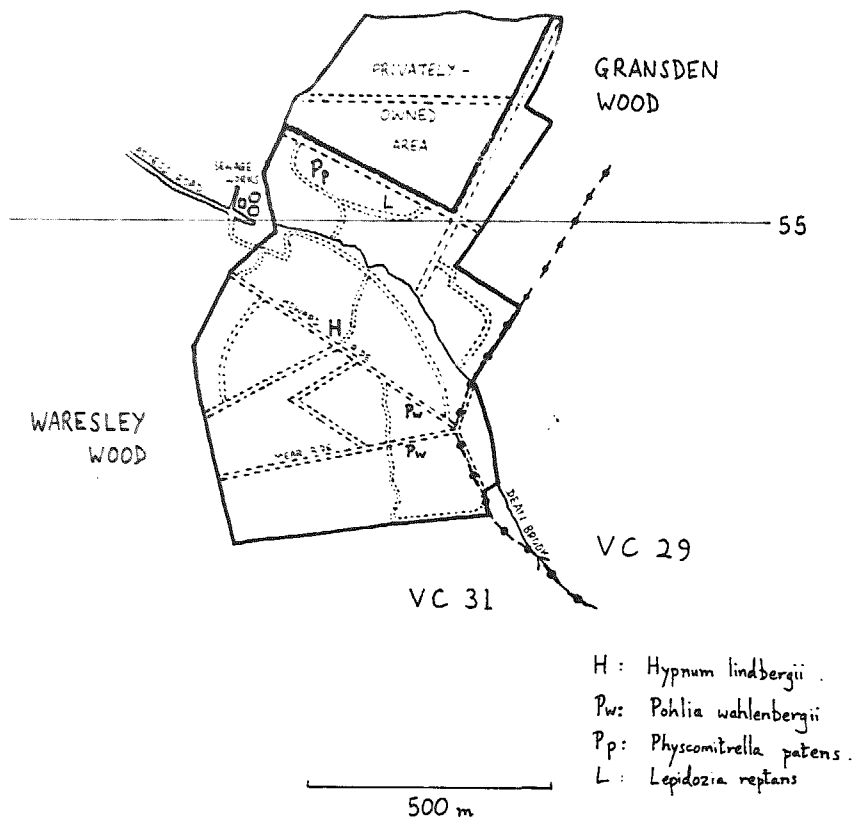
Woodlands rides are important for certain species. These should be maintained as damp, open, grassy areas.

Gransden and Waresley Woods: sketch map to show
bryophyte localities.

Site boundary: —————

Vice-county boundary: - - - - -

26



Woodwalton Fen NNR

County Huntingdon, vice-county 31
 Grid ref. TL 22-84-
 Area 208 ha (514 acres)
 Altitude 0-1 m

Owners: Nature Conservancy Council

Status: NNR, SSSI

Site description

Woodwalton Fen is an area of peatland near the margin of the Fens. Large areas have developed a community characterized by Calamagrostis epigeios over Glyceria peat. At the south end of the reserve is an acid peat community dominated by Molinia. Much of the reserve is now covered by willow/birch/blackthorn carr. There is a rich mixed fen vegetation.

Woodwalton Fen has been managed as a Nature Reserve since 1919, the major effort being to keep the water table high. A mere has been created near the centre of the site.

Bryological interest

Woodwalton Fen has been extensively explored for bryophytes, and has been visited by many eminent bryologists since the earliest surviving record was made, in 1929 by P.W. Richards. M.E.D. Poore (1956) studied the ecology of the fen and noted several interesting bryophytes. A systematic survey was conducted by B Ing and A N Barnard in 1959 and, although several errors were made, the survey resulted in a substantial increase in the bryological knowledge of the Fen.

Much of the interest lies in the acidic heathy area in the south of the Fen.

Of particular interest in this area are:

- Bryum microerythrocarpum In peat cuttings and in Molinia tussocks. Known from only one other site in Huntingdonshire.
- Campylopus fragilis On bare peat and in Molinia. This is the only Huntingdonshire locality for this moss.
- Campylopus introflexus On peat. This is one of only two Huntingdonshire sites for this moss.
- Dicranum polysetum Not seen since 1956. This is the only Huntingdonshire locality for this species.
- Hypnum jutlandicum On peat, under Calluna. This is one of two localities in Huntingdonshire for this moss.
- Polytrichum longisetum On peat. This is also at one of only two sites in Huntingdonshire.
- Cephalozia bicuspidata In Molinia tussocks. One of two Huntingdonshire localities.
- Cephaloziella divaricata In peat cutting. Last seen here in 1959, one of two sites in Huntingdonshire for this liverwort.

The remainder of the Fen is not so acidic, and many bryophytes have been recorded, of which the following are of particular interest:

27
Calliergon giganteum In wet areas in several parts of the reserve. This is the only Huntingdonshire locality for this plant, but it has not been seen since 1959.

Amblystegium varium On wood. Not seen at Woodwalton Fen, one of only two Huntingdonshire localities, since 1959.

Brachythecium populeum Raveley Drain Bank. The only Huntingdonshire locality for this moss.

Bryum pseudotriquetrum var. bimum Known from only one other Huntingdonshire locality.

Bryum pseudotriquetrum var. pseudotriquetrum Last seen in 1940, and not known elsewhere in Huntingdonshire.

Campylium polygamum Amongst reed stems. Last seen in 1959 and unknown elsewhere in Huntingdonshire.

Campylium stellatum In peat cutting. This is the only Huntingdonshire locality for this moss, but it has not been seen since 1959.

Cladocnium dendroides On woodland floor and in droves in many parts of the reserve. This moss has been found in only two Huntingdonshire sites.

Dicranella cerviculata Clay bank of dyke. The only record of this moss in Huntingdonshire.

Dicranum bonjeanii Not seen since 1956. This is the only Huntingdonshire locality for this species.

Pleuridium acuminatum Last seen in 1932, this ephemeral species is known from only one other site in Huntingdonshire.

Tortula laevipila Here at its only known Huntingdonshire locality, but not seen since 1959. Some scepticism has been expressed about the veracity of this record.

Bryum bornholmense Occurring here at its only known Huntingdonshire locality.

Chiloscyphus polyanthos One of three known Huntingdonshire localities for this plant.

Frullania dilatata On birch trees. One of three known localities in Huntingdonshire.

Radula complanata On willow. One of three known localities in Huntingdonshire.

Also of interest are:

Drepanocladus aduncus

Homalia trichomanoides

Leptobryum pyriforme

Leskea polycarpa

Orthotrichum affine

Tetraphis pellucida

Pleurozium schreberi

Calypogeia fissa

Riccia fluitans

Campylopus paradoxus

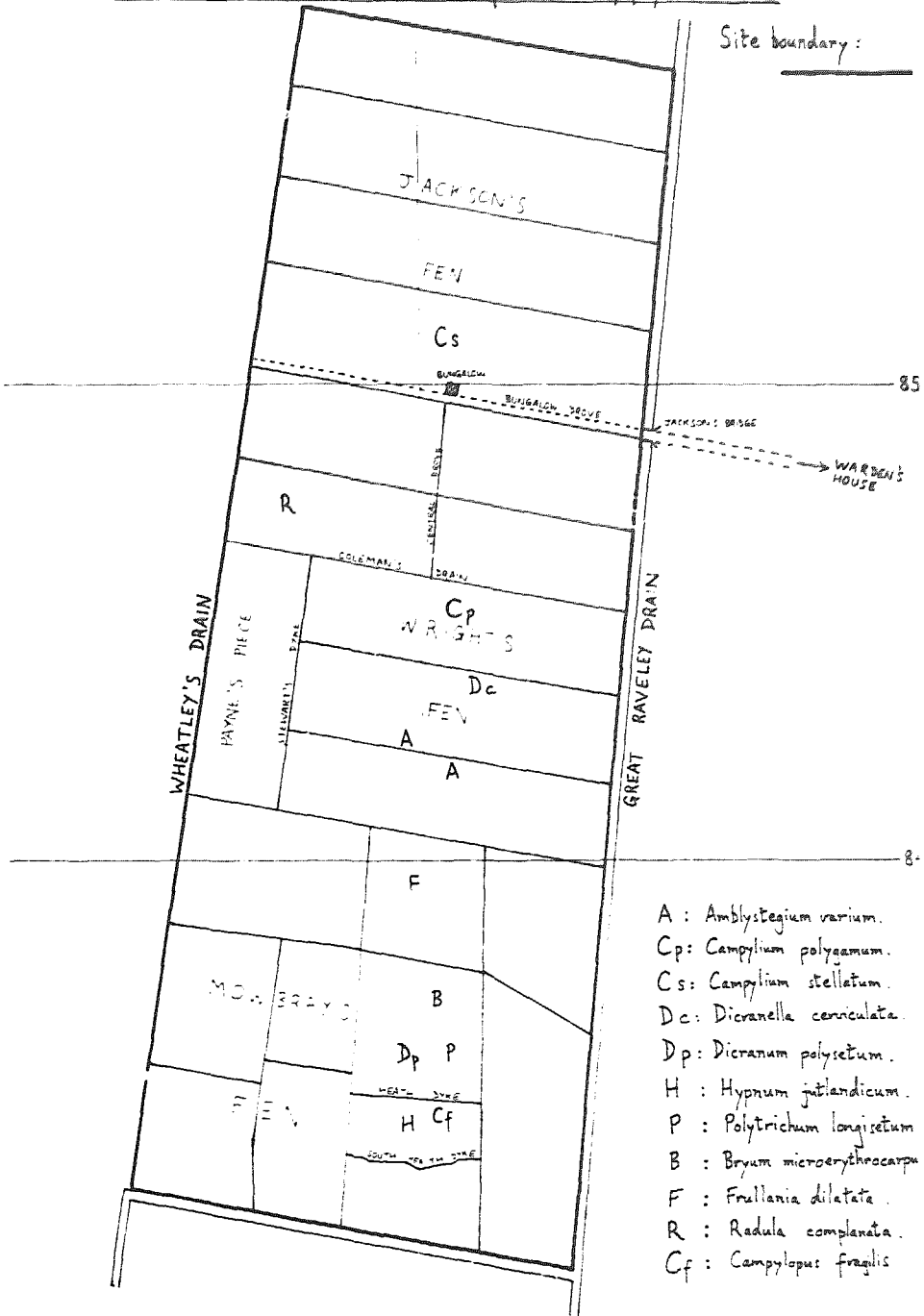
Campylopus pyriformis

Conocephalum conicum

Conservation

The site has protected status as a National Nature Reserve, so there is little threat to most species providing the water table is maintained at a high level. Acid conditions should be preserved in the heathy area in the south of the reserve, and exposures of bare peat should be maintained for many of the bryophytes that colonize it.

Site boundary: _____



- A : *Amblystegium varium*.
- Cp : *Campyllum polysanum*.
- Cs : *Campyllum stellatum*.
- Dc : *Dicranella ceniculata*.
- Dp : *Dicranum polysetum*.
- H : *Hypnum jutlandicum*.
- P : *Polytrichum longisetum*.
- B : *Bryum microerythrocarpum*.
- F : *Frullania dilatata*.
- R : *Radula complanata*.
- Cf : *Campylopus fragilis*.

3) Sites of secondary importance

Score 9-16

Sites in this category have between 22 and 36 taxa recorded recently. Locally rare species are present in all sites, but no national rarities.

Three boulder clay woodlands, one gravel pit site, one calcareous grassland site and one parish with various casual records are included.

This category can be expected to expand considerably when further survey work is carried out.

B) Sites of secondary importance

Site name	Site evaluation					Total
	(See Assessment of Sites, p 9)					
	1	2	3	4	5	
Colne Gravel Pit	6	6	2	0	0	14
Lady's Wood	4	2	1	2	0	9
Raveley Wood	6	0	1	2	0	9
Stibbington	6	3	0	0	2	11
Warboys Railway Cutting	6	3	0	2	0	11
Wennington Wood	4	3	2	0	0	9

Colne Gravel Pit

This site consists of several disused gravel pits, mostly filled with water. Thirty species have been recorded here, growing on compact sand and clay soil, including five apparently locally rare taxa:

Barbula recurvirostris This moss is known from two other sites in the county.

Fissidens viridulus This species is known to grow at only one other site in Huntingdonshire.

Pottia intermedia The only Huntingdonshire record of this generally frequent Moss.

Bryum gemmiferum One of only two known sites in Huntingdonshire for this moss.

Bryum microerythrocarpum One of two known Huntingdonshire sites. This was originally recorded in 1965 as B. alpinum but the record was later corrected by H.L.K. Whitehouse et al.

Lady's Wood

This site is a Beds. and Hunts. Wildlife Trust Nature Reserve, and is one of the fen-edge boulder clay woods. Twenty-five species have been recorded, most of which are typical lowland woodland plants.

Particularly notable are:

Frullania dilatata On oak trunk. One of three known Huntingdonshire localities for this liverwort.

Radula complanata Also on an oak. This liverwort has been found in only two other Huntingdonshire sites.

Raveley Wood

A small fen-edge wood near Woodwalton Fen, this is a local Nature Reserve and has been the subject of several bryological excursions. A good variety of typical lowland woodland species has been recorded, though none is of exceptional interest. 36 species, including:

Anomodon viticulosus

Neckera complanata

Humalia trichomanoides

Eurhynchium pumilum

Orthotrichum affine

Stibbington

In the 1950s J.L. Gilbert made several records for the village of Stibbington, which, with more recent records, give a species list of 31 taxa, some of which are apparently rare in Huntingdonshire.

The most interesting records are:

Schistidium apocarpum On stone walls. One of only two records for this species in the county.

Tortula ruralis Collyweston slates on roof. One of only two Huntingdonshire records for this generally common moss.

Bryum pseudotriquetrum var. bimum This moss, known elsewhere in Huntingdonshire only from Woodwalton Fen, was recorded in the mid 1950s from Stibbington Gravel Pits.

Warboys Railway Cutting

This site is a Beds. and Hunts. Wildlife Trust Nature Reserve, and one of the few examples of calcareous grassland in the county. There are also areas of scrub on the reserve. It has a species list of thirty bryophytes, including calcicolous species not found elsewhere in the county.

For example:

Pottia lanceolata Frequent on calcareous soils, but unknown elsewhere in Huntingdonshire.

Ephemerum recurvifolium This rare and elusive species of bare calcareous ground was found on an ant-hill. It has not been found elsewhere in the county.

Orthotrichum cupulatum On mortar in the bridge over the cutting. This is the only known Huntingdonshire locality for this moss.

Wennington Wood

A total of 22 bryophyte species have been recorded from this large fen-edge wood, but there must be many more yet to be discovered.

Of particular interest are:

Campylopus paradoxus

Homalia trichomanoides

Plagiochila porelloides Ditch by main ride. One of only two Huntingdonshire records for this liverwort.

Porella platyphylla On tree stump. This liverwort is also only known from two localities in the county.

It is thought that this wood may be the site of the first bryophyte record for Huntingdonshire: Thamnobryum alopecurum, by W Skrimshire in 1794, from "Ripton Wood".

Arctus Lised is near (1956) a Cat B. site.

C) Sites of tertiary importance

Score 5-8

These sites have short species lists, but many have locally rare taxa present, and one site has a national rarity.

Most sites are woods, but fen, grassland and arable land are also represented.

In many cases further recording may produce a longer and more interesting species list and the inclusion of a site in this category does not indicate that it is of low value.

C) Sites of tertiary importance

Site name	Site evaluation (See Assessment of Sites, p 9)						
	1	2	3	4	5	Total	
Archers Wood *	4	2	2	0	0	8	(New Cat. B.)
	<u>Platygyrium repens</u>						
Brampton Wood SSSI	4	2	2	0	0	8	
	<u>Hypnum lindbergii</u>						
	<u>Pleurozium acuminatum</u>						
Conington Round Hill	4	0	1	0	0	5	
Conington Triangle Plantation	4	0	1	0	0	5	
Elton Furze Main Wood	4	0	1	0	0	5	
Gamsey Wood	4	0	1	0	0	5	
Gr Stukeley Lodge Rly Cutting	4	2	0	0	0	6	
Hilton, Lattenbury Br., N. of	2	3	0	0	0	5	
	<u>Dicranella schreberana</u>						
	<u>Ephemerum serratum var. minutissimum</u>						
	<u>Weissia longifolia</u>						
Holywell Fen	2	2	1	0	0	5	
	<u>Tortula latifolia</u>						
Polts Wood	4	0	2	0	0	6	
St Ives	2	3	0	0	2	7	
St Ives, Old Railway	4	1	0	0	0	5	
Upwood Churchyard	4	1	0	1	0	6	
	<u>Rhynchostegiella tenella</u>						
Upwood Meadows	2	0	2	2	0	6	
Wistow Wood, Warboys & Wistow Woods SSSI	4	1	1	2	0	8	
	<u>Dicranella schreberana</u>						

* 1986. Further spp found in Archers Wood, including Plagiothecium latebricola (with gemmae) and Isopogon oligos, on wet clayey ground: both near to VC 31. Wood now a Woodland Trust reserve.

D) Isolated records and short lists

Score 1-4

The sites in this category are not listed separately, but are given in the locality print-out (see Appendix 1). These sites are not necessarily of little interest and further recording, particularly at the larger sites, may result in a longer species list. Most SSSIs have no bryophyte records (see Appendix 3, listing 5) and these should have high priority for recording.

NATIONALLY RARE TAXA PRESENT IN HUNTINGDONSHIRE

Huntingdonshire has one nationally rare species (ie recorded in 10 or fewer vice-counties since 1950) and that is Platygyrium repens.

1011 Platygyrium repens

Closely related to Hypnum cupressiforme, which it resembles, but is distinct in the rather short upright branches which bear axillary bulbils nears the apex. It forms dark green or coppery coloured patches on bark in woodland. It is known at present from 10 vice-counties scattered from Bristol to Edinburgh, but it may have been overlooked or it may be spreading. It has been found in three localities in Huntingdonshire.

1011 *Platygyrium repens*

10KM	GRID-REF	VC	DATE	REC	SC	H/L	ALT	LOCALITY
52/17	52198799	31	22.03.1982	615	1		30	Monks wood NNR
52/18	5217-80-	31	.01.1968	28	3	171	40	Archers wood
	52161819	31	03.02.1985	490	1		40	Aversley Wood SSSI
52/28	52201806	31	1968	100	3	171	30	Monks wood NNR
	52200806	31	19.02.1977	288	1		30	Monks wood NNP
	52210806	31	25.10.1980	381	1		30	Monks Wood NNP
	52201806	31	08.11.1985	436	1		30	Monks Wood NNR

THE NATIONAL IMPORTANCE OF HUNTINGDONSHIRE SITES

Ratcliffe (1977), in the Nature Conservation Review, includes five Huntingdonshire sites considered to be of national importance for wildlife in general, four of Grade 1 status (Holme Fen, Woodwalton Fen, Monks Wood and Upwood Meadows) and one of Grade 2 status (Port Holme). Of these, Holme Fen, Woodwalton Fen and Monks Wood are the three most important known sites in the county for bryophytes. Upwood Meadows is not of outstanding bryological interest, and Port Holme has not been surveyed. As a predominantly grassland site, the latter cannot be expected to be as bryologically rich as the woodlands.

Huntingdonshire has one of the most continental climates of any county in Britain, and is clearly not suitable for the Atlantic species for which the west side of the country is of international importance. Even the generally common liverwort Lepidozia reptans has only one confirmed locality in the county.

Holme Fen and Woodwalton Fen are of national importance as two of the very few remaining examples of lowland fen peat vegetation, and Holme Fen is considered to be the finest development of woodland on fen peat in lowland Britain. Monks Wood and the remaining larger woods on the boulder clay are nationally important as examples of the ash-maple type of lowland woodland.

The bryophyte communities supported by these sites are no less characteristic than those of the vascular plants, though there may be few rarities present.

CONCLUSIONS

Huntingdonshire is a small county, easily accessible and reasonably close to centres of botanical activity, yet, unlike the neighbouring county of Cambridgeshire, comparatively few bryophyte records have been made here. There may be several reasons for this. Firstly the predominance of arable land, often in huge prairie-like expanses of monoculture, is not suitable for most bryophytes, or indeed many forms of wildlife. Other habitats have largely been eliminated from these areas. This, taken with the strongly continental nature of the county, makes Huntingdonshire a rather dull place for the bryologist. Furthermore, neither chalk nor limestone come to the surface at any point in the county, so many of the calcicoles found in the neighbouring county of Cambridgeshire are absent here.

Huntingdonshire has not always been easily accessible, the heavy boulder clay soils making travel difficult until quite recently. Before c. 1940 there were only two metalled roads in the county!

The presence of three large and famous National Nature Reserves in the county has meant that when bryologists have come to Huntingdonshire they have generally visited these, and ignored all other sites. For example, Monks Wood has been the subject of numerous bryological expeditions, with the result that it is now well known, yet the potentially very interesting Warboys Wood (to name only one of many possible examples) is bryologically unknown. Even Aversley Wood, listed in this report as a Category A site, has only been seriously investigated three times.

Thus, what records there are for Huntingdonshire bryophytes tend to be concentrated on the three NNRs, with lesser lists from a few other sites, of which only Aversley Wood and Gransden and Waresley Woods merit Category A status. Only six sites are found in Category B, and of the remainder, the Category C and Category D sites, there are only a small number which do not have lists of truly monumental insignificance. Many of these sites, however, are likely to prove to be of greater importance than they appear at present when further recording work is done.

The feature of Huntingdonshire that stands out is the low number of sites which have been studied bryologically, and the main conclusion of this report must be that a great deal more field work needs to be carried out to obtain a reasonably comprehensive body of information on Huntingdonshire bryophytes. Potentially interesting sites are suggested in Appendix 3, Listing 5. In particular, high priority should be given to the SSSIs, and the large number of deciduous woods (some of which could be at least as good as Aversley Wood, for example) which have not yet been surveyed.

The Category A sites listed are all Nature Reserves and so have protected status, but many of the inadequately surveyed and unsurveyed sites have no such protection and only surveys will reveal whether or not some protection of these sites is desirable.

Many generally common species, such as Pellia epiphylla, have yet to be recorded in Huntingdonshire. Where they occur in one or more of the neighbouring vice-counties (29, 30 and 32) these are listed in Appendix 3, Listing 11, along with less common species found in neighbouring vice-counties.

ACKNOWLEDGEMENTS

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