

# 1

## THE CAMBRIDGESHIRE COUNTRYSIDE

Cambridgeshire covers an area of over 500 000 acres most of which is good, not to say rich, agricultural farmland. Surprisingly, the county borders as many as eight others, in clockwise order: Norfolk, Suffolk, Essex, Hertfordshire, Bedfordshire, Huntingdonshire, Northamptonshire and Lincolnshire. At its northernmost point (Wisbech) it is only five miles from the sea, and the River Nene is tidal for a way into Cambridgeshire, yet for all that the lack of coastline is very significant since it restricts both the number of species recorded in the county and the occurrences of those marine birds that wander inland. It is easy to divide the county into north (fenland) and south (chalk and boulder clay) by topography and it is within these divisions, plus suburbia, that the county is described below.

### FENLAND

The northern part of the county includes what remains of the vast watery fen that Vermuyden succeeded in draining. It is a flat, somewhat desolate landscape, short on trees and rich in agricultural production, celery, potatoes, carrots and beans are grown in plenty on the black peaty soils. Many a visitor finds the fenland unprepossessing and featureless but to the native and the ornithologist it is an area of immense possibilities. Ever since the Romans came various attempts had been made to drain the marshland which stretched from Waterbeach in the south through to Lincolnshire in the north and Suffolk in the east (see Fig. 1).

The most successful scheme was sponsored by the Earl of Bedford in 1606 and involved cutting a watercourse from the Ouse at Earith to Denver in Norfolk. The 'Old Bedford' as this watercourse was called was followed later by a second cut the 'New Bedford'. This plan, devised by the Dutch engineer Vermuyden, aimed to cross the fens with dykes and rivers which were higher than the land and to then pump the water from the land by windmill, along the 'cuts' to the sea at King's Lynn. The two Bedford rivers with high outer banks and low inner, provided relief so that when the water level rose the resulting floodwater was deposited on the

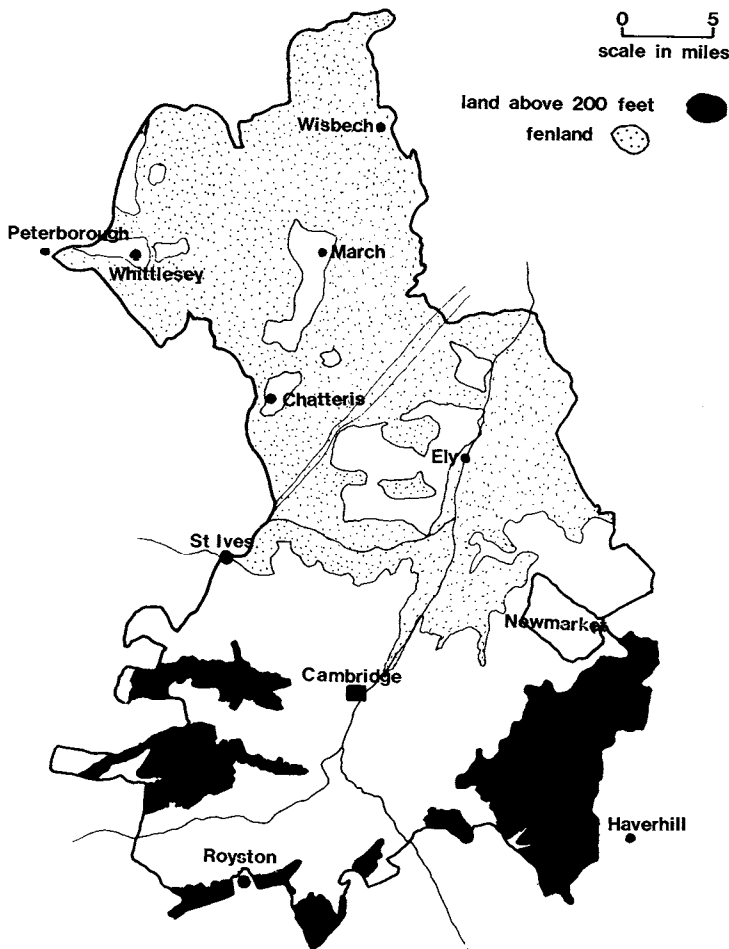
## 2 The birds of Cambridgeshire

central plain: the Ouse Washes. Not only did this scheme totally change the agricultural use of the fens, but it also provided, in this relatively small area, an alternative haven for the birds displaced from the previously flooded areas.

The same principle was used on the Nene although to date its ornithological importance has remained subordinate to its better-known neighbour. Being now under management and having the advantage of being closer to the sea, this area may well prove the more exciting over the next ten to twenty years (already Black-winged Stilts have attempted to breed).

The fenland area, like the rest of the county, has one or two gravel pits, at Mepal/Block Fen and Wimblington, for example, and on its western

Figure 1. Cambridgeshire – map to show the areas of fenland and high ground.



perimeter the pit at Fen Drayton is undoubtedly an important area for wildfowl in its own right.

The flatness of the fenland makes it ideal hunting ground for predators (Barn Owl, Kestrel, Short-eared Owl, and in winter the occasional Peregrine). It is also important to note that the absence of hedgerow in the fens is almost entirely due to the presence of the ditches since these form a most effective boundary between fields.

Where the fens begin or end is difficult to determine precisely but the map (Fig. 1) shows the outline of the southern limits.

A final word of explanation is required concerning the naming of parts of the water and road systems. The dykes or ditches that run along individual fields are often called simply 'drains'. In some parts the more substantial waterways, which are the size of small rivers, are called lodes, as in Wicken Lode, Burwell Lode, and Reach Lode. A further common name, drove, applies to the straight single-lane rough roads that lead to isolated communities.

## CHALK

The southern half of the county is based on two differing soil types, the largest of which is the chalk escarpment that runs from Royston in the west to Newmarket in the east and covers the whole of the south-eastern part of the county. Until the Enclosure Acts, around 1800, most of this area was open grassland such as now remains around Newmarket Heath, but in time it has become good agricultural land and is now used to grow cereals, rape and sugar beet. In the chalkland, too, are to be found almost all of the ancient walkways, the Icknield Way being perhaps the best known, and the two earthworks, Fleam Dyke and Devil's Dyke, or Devil's Ditch as it is sometimes called. These were dug for the protection of the local population and are considered to be post-Roman.

The chalkland is the home of many unusual bird species and is still hedged in places, although most of the farms in the area have enlarged their fields over recent years. One of the interesting features of this part of the county are the strips of scots pine that are often used as field separators.

In this area there are many small woodlands, but their quality as ornithological sites, where it is known, is generally not high. Nor are they very great in size and the diversity of tree species is often low with ash being predominant. However, the beechwoods, of which Wandlebury is probably the finest, offer a valuable habitat to many bird species for which

#### 4 The birds of Cambridgeshire

the county is not generally environmentally hospitable, such as the Nuthatch.

The two aspects that add to the flavour of the chalk area are based on water. First there are a number of medium-sized gravel pits that have been excavated (see Fig. 2). These provide standing water suitable for grebes, ducks, visiting waders, and many waterside passerines. Secondly, natural water is provided by the presence of springs in many small sites, Fowlmere watercress beds being the best example. This spring water which erupts throughout the year gives these sites a true wetland vegetation and has led to a number of areas on the chalkland being given the name fen, as in Dernford Fen, Quy Fen and the area called Fulbourn, Wilbraham and Teversham Fen. The woods at Sawston Hall, and at Whittlesford Middlemoor (now sadly partly ploughed up) remain damp underfoot even in summer due to springs and although small in size have a rich diversity of flora and fauna.

Over the chalkland as a whole the scrub layer proceeds rapidly where there is no grazing or cultivation to prevent it and dogwood (*Cornus sanguinea*), spindle (*Euonymus europaeus*), wild roses (*Rosa canina*, *R. rubiginosa*), wayfaring tree (*Viburnum lantana*) and buckthorn (*Rhamnus catharticus*) emerge, but in general the area remains open agricultural land with minimal amounts of pasture and diminishing hedge cover.

#### BOULDER CLAY

There are two large areas of boulder clay; one runs across the south-western part of the county from Coton to Tadlow and the other is on the eastern border from Linton to Cheveley. Their importance is that in these two areas lie woodlands of real value to the avifauna. In the west are Hayley, Buff and Hardwick Woods, Overall Grove and Knapwell Wood, and in the east Ditton Park and the Widgham Woods together with many smaller units.

The traditional method of management of these woods has been coppicing with standards which involves leaving some standard trees and coppicing most of the remainder. Commonest are standard oak and ash, with hazel coppiced beneath. The two layers give two habitat areas, with arboreal species such as tits, woodpeckers, Nuthatch, etc. catered for above, and warblers and thrushes in the scrub layer. Many of these woods have pools or streams within them adding a further vital dimension.

Apart from the woodland, however, this area like the rest of the county is mainly agricultural land interspersed with areas of human habitation.

## SUBURBIA

Suburbia is a strangely neglected but important wildlife habitat which forms an important part of the southern half of the county for this is the centre of population. This heading is taken to include all areas of human habitation.

A development of this century has been the care and attention people have begun to give their gardens and although the formalisation has led to the loss of the 'wilderness garden' many of the developments have been responsible for increases in certain species. Tree-planting in general and conifer planting in particular has enhanced the suburban possibilities for nesting and shelter and there can be no doubt that the hedges have begun to assume great importance particularly where they border farmland. Nestboxes affixed to apple trees, the fallen apples, soft fruit and the regular provision of food such as nuts and seeds play a great part in providing alternatives for species whose natural habitat is shrinking away. Playing fields with their large areas of open grassland are very common around the city of Cambridge. Allotments, ponds and copses provide a very diverse habitat for those species prepared to live close to habitation. Many species can be seen in the centre of the city where the college gardens play an important role in the provision of food and shelter. Black Redstarts, for example, have a particular liking for this habitat as nearly all of the recent breeding records show.

Cambridgeshire, then, is a unique combination of habitats based on these different soil types. Its most obvious features, however, are the huge agricultural area, the lack of heavy industry and the fact that apart from the area around Cambridge City there are very few centres of population.

## 2

## THE CHANGING STATUS OF CAMBRIDGESHIRE'S AVIFAUNA 1934-1986

As it is now more than 50 years since the publication of Lack's *Birds of Cambridgeshire* it is inevitable that many changes, both anthropogenic and topographical, have taken place. These have been influenced initially by the Second World War and latterly by the technical and agricultural revolutions that have followed in its wake.

### POPULATION EXPANSION

Throughout the world the effects of population growth have both directly and indirectly been the most important factors affecting the environment and thus the avifauna, by placing great pressure on the available land for human needs such as food production, housing and recreation. For example, in my native village of Sawston, which has always been designated an expansion zone, one third of the agricultural land available in 1947 had been built upon by 1975. This is somewhat extreme, and other villages have grown less quickly, but it gives a clear indication of the sort of loss of habitat that wildlife endures in such circumstances. However, in general Cambridgeshire has retained its principally agricultural status and has not been in the forefront of the population explosion, remaining very much a rural county with any large-scale expansion limited to its principal city and some of its largest villages.

The primary effect, in Cambridgeshire, of population growth is the need for increased food production, which in this country has been coupled with a curiously illogical EEC farm policy and supported by Government development subsidies. This has led to considerable destruction of the valuable field fringes and the draining and annexing of wet meadowland and scrub in order to increase the area of land actually used for production. The resulting destruction of hedgerows, the introduction of new crops such as oilseed rape, the commercial growing of many domestic vegetables, and the loss of meadowland resulting from the change of emphasis from livestock to arable have also changed the physical nature of the county, particularly away from the fenland.

## Cambridgeshire's avifauna 1934-1986 7

There is, however, a very positive side to the advance in technology and growth in human numbers and that is the great upsurge of interest in the environment as a whole and birds in particular. This interest has led to the voluntary organisations becoming more powerful and certainly more wealthy so that we are now blessed with several excellent reserves. The development of the Ouse and Nene Washes, Wicken Fen and Fowlmere watercress beds by carefully planned management has provided some recompense for the loss of other areas, the most notable of which was the modernisation of Cambridge sewage farm which reduced this site of national importance to one of mere local interest.

There are at the time of writing a number of important sites that remain in private ownership. This leaves their future rather insecure, and although some are sympathetically managed past experience has shown that this situation can change literally overnight.

There is, however, a most direct effect of the increasing interest and that is that more people (136) contributed to the 1984 *Cambridge Bird Club Report* than even belonged to the club in 1934 (99).

### THE ENVIRONMENT

#### The effect of the war

Following the publication of Lack's *Birds of Cambridgeshire* in 1934, the first and most vital factor that affected the county was the Second World War. Since the blockade from Europe was so effective the exhortation for self-sufficiency was used to convert 'waste' land to agricultural use, as at Burwell where areas adjoining Wicken Fen, the Adventurers' Fen of Ennion's excellent book, were drained never to return to their natural state. This undoubtedly reduced the richness of the area for wintering wildfowl and birds such as Bittern, harriers, etc. During the war years, however, the absence of some members of the community such as gamekeepers resulted in an increase in numbers of 'vermin' bird species, Sparrowhawk being a good example, so not all effects were negative. It was also around this period, if not earlier, that the old hay-meadows began to disappear. This was a slow process linked to the gradual modernisation of farming methods, but was particularly bad for the Corncrake as noted by Norris in the *Cambridge Bird Club Report* for 1938.

#### Pollution

Just as a kind of stability was returning during the 'boom' post-war period with tractors replacing horses and combine harvesters taking on the

## 8 The birds of Cambridgeshire

harvest where reaper and binder and threshing machines had once worked, the horror of the effects of the organo-chlorine pesticides began to emerge particularly for those species at the head of the food chain such as Sparrowhawk and Barn Owl. Since so much of the county is an arable growing area, the extent and duration of the effects were greater than in most counties and the early 1960s proved a difficult period for most raptors. Some of the species that were affected have not recovered fully to this day.

The next environmental problem was that of Dutch Elm disease which had dual effects. Undoubtedly in a county so bereft of trees, to lose so large a proportion has proved detrimental to the avifauna and since many elms were to be found on farmland, in hedgerows or in small copses, this loss has been particularly tragic. In recompense, woodpeckers and tree feeding species benefited temporarily from both the increased food supply and the increase in available nesting holes. However, many species have been deprived of their only refuge. Rooks in particular seem to have been slow to colonise other tree species at their traditional nesting sites and have shown a steady decline up to recent times.

Once again the Kestrel has become a conspicuous feature of our countryside – a pleasant return of population after the slump in numbers during the 1960s.





### **The agricultural revolution**

With the advance of mechanisation in the fields much has changed, for example the amount of time that a field stands fallow, when it provides opportunity for many species to forage, has been greatly reduced in recent years. The change to the environment which has caused perhaps the most dramatic effects is the destruction of large numbers of hedgerows, many of which dated back to the time of the Enclosures. This has been encouraged by the provision of Government money and the high price of the grain that can be grown on the extra land. Hedgerows have not been the only victim here, some copses and field fringes have been destroyed, wet meadows have been drained and much pastureland has gone under the plough. Cattle and sheep are no longer commonly to be seen in the county. At the time of writing, the public has become alarmed and distressed at this use of revenue and it seems likely that this policy will soon cease or even be reversed; yet not before Cambridgeshire, once again at the forefront of agricultural change, has been turned into a vast open cereal, rape and beans prairie.

### **Gravel Extraction**

One of the most beneficial changes to have taken place in the post-war period has been the commercial exploitation of the building materials that lie beneath the surface. Clay, gravel and chalk have all been excavated to some considerable depths leaving huge voids which readily fill with water. In Cambridgeshire, while some of the chalk and clay pits are quite old, most of the gravel pits are of more recent origin, several dating from the building of the M11 motorway. One of their finest features is that they are well spread across the county (see Fig.2), and the digging of a pit near Whittlesford in south Cambridgeshire has changed the avifauna in that area to so great an extent that in two weeks recently I was able to record five different species of geese, something that must be unprecedented in that area. An additional important consideration is that most of the counties bordering Cambridgeshire now have a similar number of such pits, Huntingdonshire in particular, and the development of Grafham Water in that county cannot be ignored when seeking to explain the increase in waterbirds that has occurred. The breeding of both Cormorant and Common Tern are recent examples of the success of the pit system, and the colonisation of this country by the Little Ringed Plover is well documented.

## 10 The birds of Cambridgeshire

### CHANGES IN THE STATUS OF THE BIRDS

Thorpe in his lecture of 1974 to the Cambridge Bird Club stated that it was his impression that the decline of some species had begun a long time previously and that for many of the rarest the problem was that their position in this country has always been tenuous due to being on the very edge of their range.

#### Birds no longer breeding

With regard to the birds that have been lost as breeding species, Cambridgeshire has been no more than a reflection of a national picture; Corncrake, Nightjar, Wryneck, Red-backed Shrike and Woodlark being prime examples. For most of these species pressure, however slight, on their breeding habitat seems to have reduced their populations to untenable levels. Some species (e.g. Sparrowhawk and Barn Owl) have declined for specific reasons and now show some sign of recovery, albeit slow; others such as Quail and Stone Curlew seem to just hang on, neither increasing nor decreasing, yet their future looks rather bleak. Redstarts, having bred regularly and in some numbers in the last century, gradually declined so that by 1940 regular breeding ceased. Since then there have been spasmodic records, the last being in 1974. Whinchat also was a

Figure 2. Cambridgeshire Pit System, areas of man made gravel and mineral workings now flooded.

