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WILD WORSLEY

Peter Edmondson

The
Natural History
of the
Woodland

A BIOGRAPHY OF WORSLEY WOODS

Peter Edmondson

DEDICATION

In Memory of Maura.

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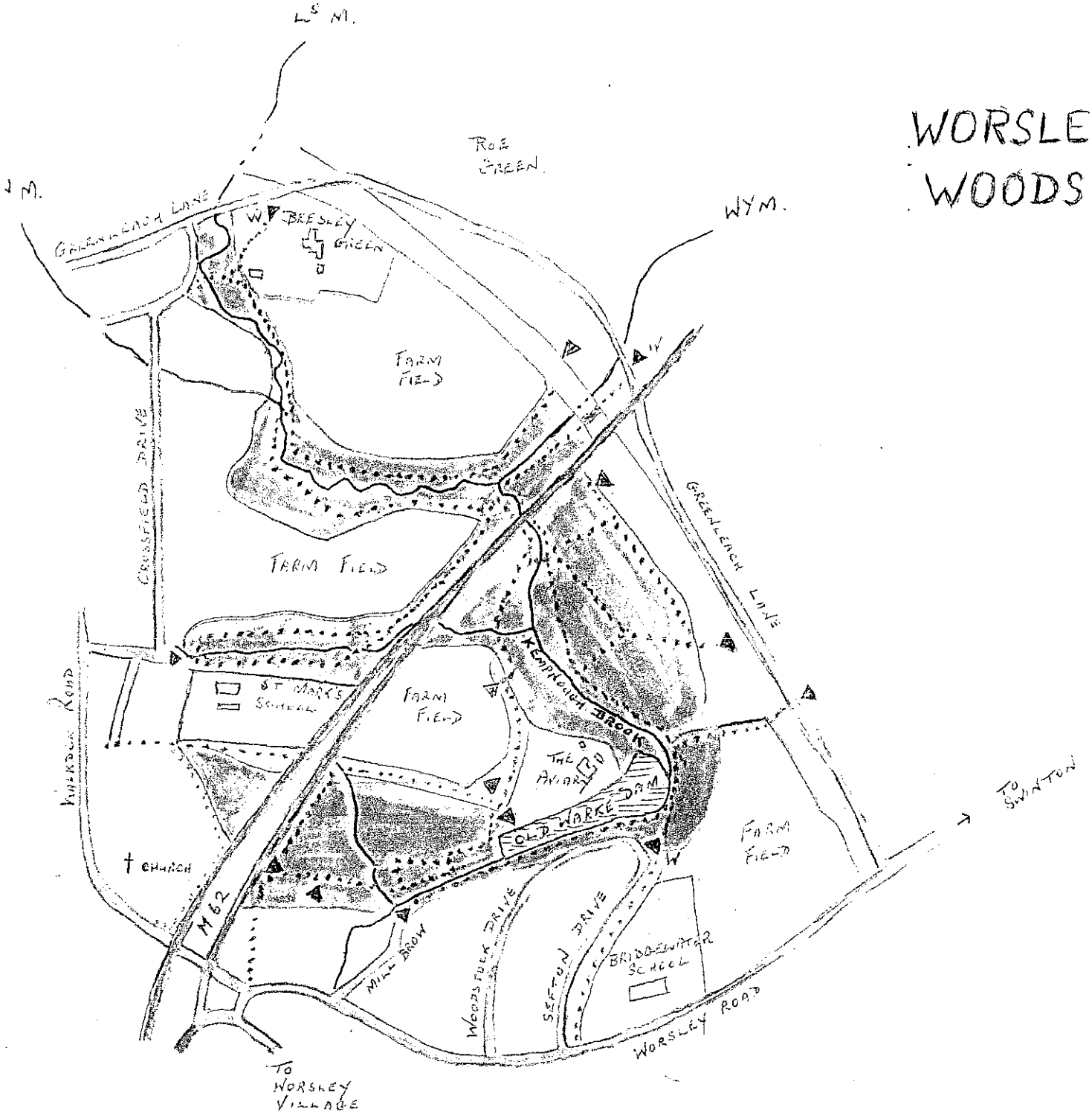
WORSLEY WOODS



WOODLAND

LINEAR PARK

MOTORWAY

OTHER ROAD

BROOK

FOOTPATH

ACCESS

ACCESS FOR WHEELCHAIRS

WATER SOURCES

W^N M - WALKDEN MOSS
L^S M - LINNYSHAW MOSS
W^Y M - WARDLEY MOSS

N

0 1/4 MILE.

PROLOGUE

The history of Worsley has been recorded in many written works. Its connections with the Earls of Ellesmere and the Dukes of Bridgewater are amply documented, as is its importance as a cradle of the Industrial Revolution. Such literary attention is well justified. By comparison, Worsley's countryside and its natural history have received little attention. Such authorship as has been exercised, mostly takes the form of guides which tend to direct their readers along prescribed routes with unconsidered haste, until they are returned with some degree of precision to the point from which they started. Worsley's areas of natural beauty are worthy of greater consideration than such guides invoke. Certainly the woodlands, of which the linear park (old railway line) has become an integral ecological component, should not be passed by or through with such fleeting contemplation. In the words of Samuel Taylor Coleridge;

> "No waste so vacant, but may well employ
> Each faculty of sense, and keep the heart
> Awake to love and beauty."

Although the following text may describe certain locations and draw attention to that which should not be overlooked, an attempt has been made to keep such instruction to a minimum. Free to wander at will, one will see more and learn more than when looking for the next landmark or turning point. Whilst the description of the present day woodlands follows the direction of the central water-course, it should be possible to review it in reverse order or attune to its theme from any of the twelve or so access points.

It is, more often than not, a newly learned morsel that embarks the previously uninitiated nature watcher upon the search for more and more knowledge. It may be that having a treecreeper and a nuthatch identified for you and learning that the former can climb from the bottom to the top of a tree trunk but must fly in order to descend, whilst the latter can 'walk' in both directions, you would be instilled with the desire to know more about all the other woodland birds. Alternatively, it may be the sudden realisation that many of the flowers which look like dandelions could, if you studied the shape of their leaves, be catsears, sow-thistles, hawkbits or hawkweeds, which would start you off on a study of all your local wildflowers.

Once the study of wildlife or natural history becomes your hobby or pastime, you will soon have the desire to see the entire tree of knowledge. Be warned now that this is unattainable! Unlike we humans, the mighty oak tree continues to grow and change throughout its entire life. So it is with the vast and open-ended subject of natural history. Palaeontologists are still making discoveries which re-write the past and alter our understanding of the present. Botanists and zoologists are still discovering new species which fill niches in the natural world, about the existence of which we were hitherto ignorant. Finally, evolution is still at work shaping the future.

We cannot all travel to a Kenyan safari or go whale-watching in the great Canadian seaways, but the study of our own doorstep countryside can reveal a greater variety and diversity of nature, from season to season and from month to month, than may be found in the habitats of the large exotic animals.

In writing this 'Biography of Worsley Woods', it is hoped not only to inspire formerly casual visitors to the woods to take a closer look at their surroundings, thereby extracting greater pleasure from their strolls, but to encourage them to have an interest in the well-being of the flora and fauna. Greater knowledge and understanding of the natural world surely make the destruction and vandalism of trees and shrubs far less attractive to those who currently indulge in this aimless activity. It is a great annoyance every year to see people, not all of them children by any means, breaking branches off horse chestnut trees in order to take possession of a few half-formed and unripe 'conkers', whereas, if they would have patience for a further two or three weeks, they could then return to find the floor of the woods literally carpeted with mature ripe ones.

Whilst this book is about Worsley Woods, and its second part exclusively so, the first part under the heading of Woodland History deals with subjects such as geology and climate which, although being responsible for the formation of the local landscape, must be considered in the countrywide, continental, or global scales of their influence. In dealing with these topics it is not possible to concentrate on a small area in an insular fashion. For this reason, the reader will find references to Worsley minimal in those sections. However, whilst reading them, do not lose sight of the fact that those wider influences have given us the geological stratas, flora and fauna, that are now to be found in Worsley and its woodlands.

PART ONE - WOODLAND HISTORY

Introductory.

Walking amongst the sixty or so acres of broadleaved trees that constitute Worsley Woods, it is difficult to believe that from here, on a quiet Sunday morning, you could drive to the centre of Manchester in fifteen minutes - Cumbria or the Industrial Midlands in little over an hour.

Sheltering from the rain or seeking relief from the heat of the sun, under the dense canopy of the majestic beech trees, you can stand beside clumps of enchanter's nightshade and watch siskins or coaltits flirting with the alders along the final pourings of Kempnough Brook, before it seeks anonymity in the wider waters of Old Warke Dam. Now step down onto the main path and look back at these grand arborial matriarchs. They have grown and flourished during the reigns of two queens and four kings of England. They have heard the distant gunfire of the American Civil War, the Boer War, and two World Wars. They have mourned the deaths of de Quincy, Coleridge and Wordsworth, and shuddered to the throbbing engines of Zeppelin and Heinkel. Yet still they stand, silent and magnificent monuments of apparent immortality.

Whilst these old beeches are the most impressive constituents of the woods, they are but one of sixty or seventy species of trees and shrubs which are to be found within these environs. (For the benefit of anyone who is uncertain of the difference between a tree and a shrub, the definition is a simple one. Trees have a single woody stem, or trunk, from which branches grow to form a crown. In the case of shrubs, the branches rise at ground level forming a crown without a single supporting stem). In addition to trees, some one hundred and fifty wildflowers and plants, sixty bird species, and thirteen mammalian species are listed at the end of this book. The list is not claimed to be a comprehensive catalogue of the wildlife which exists in the area, but merely a record of observations made by the writer, in the woods, along the linear park, or on the dam. It remains his unfulfilled ambition to study and record the great number of grasses and sedges which grow in the same area. Grasses constitute a very highly evolved and successful group of flowering plants. By comparison, the impressive magnolia is of a very primitive order which first appeared a hundred million years ago, and has remained virtually unchanged since.

Before considering the greater diversity of the local flora and fauna, let us look at the shape and nature of the underlying woodland landscape, and the forces and events which formed it. These can be divided into three categories - geological, climatic, and human influential.

Geology

Geological development has been taking place for over 4,500 million years, since the burning mass of chemicals and gases that was to become the earth arrived in orbit around the sun. As the earth's outer surface began to cool it formed a crust, but one which was fragmented into plates - moving and jostling about as they still do today, carrying the land masses with them. The fragment which underlies Britain has moved in this fashion and once, about 300 million years ago, bestrode the equator.

This land has been subjected to great stress, to unimaginable heat, to unbelievable cold, to earthquake and much volcanic outpouring. It has tilted and submerged beneath the sea, to re-emerge millions of years later bearing vast deposits of mud and chalk. It has been exposed for many more millions of years to wind, rain, ice and frost. At one time there were mountains in the north of Britain, in Ireland and in Wales, which rivalled the present day Himalayas. Over countless millions of years they have been worn down by the elements to the more modest stumps of today. Whilst the Himalayas are a mere 25 million years old, there is a sandstone mountain, Suilven, in north-west Scotland, which is 1,000 million years old and which stands on underlying Lewisian gneiss some 2,800 million years old.

The geological classification of rocks is determined by their age and method of formation. Geological age is divided into eras, periods and epochs. On the following age chart, it will be noticed that only the last 65 million years have been divided into epochs. Prior to that it is sufficient to refer to the period or era.

GEOLOGICAL AGES

ERA	PERIOD	EPOCH	DURATION (Years)	YEARS AGO
	Quaternary	Holocene (recent) Pleistocene	10,000 to date c. 2m	10,000 to date c. 2m
Cenozoic	Tertiary	Pliocene Miocene Oligocene Eocene Palaeocene	5m 19m 12m 16m 11m	7m 26m 38m 54m 65m
Mesozoic	Cretaceous Jurassic Triassic		71m 54m 35m	136m 190m 225m
Upper Palaeozoic	Permian Carboniferous Devonian		55m 65m 60m	280m 345m 395m
Lower Palaeozoic	Silurian Ordovician Cambrian		45m 60m 100m	440m 500m 600m
Pre-Cambrian	No world-wide system of sub-divisions		Probably more than 4,000m	c. 4,600m

The methods by which rocks have been formed, fall into three main categories;

Igneous :-

These are rocks which have been cooled from a state of fusion, having been brought up as molten magma from below the earth's surface. Slow cooling beneath the surface has formed rocks with large crystals such as granite, whilst quick cooling on the surface has produced rocks with fine crystals such as basalt.

Metamorphic :-

Rocks which have undergone change due to intense heat, immense pressure, or both. When molten magma was introduced into limestone it became marble. Shale, comprised of compressed silt or mud, has been further compacted into slate.

Sedimentary :-

These rocks occur in layers, having been deposited in ancient seas or pre-historic lakes. They are comprised of particles of other rocks or mud, or in the cases of limestone and chalk, the remains of billions of tiny molluscs and other minute sea creatures which, on dying, settled on the sea floor.

In addition to the above, of course, there are coal seams which were laid down during the Carboniferous period, between 280 and 345 million years ago. They were formed from greatly compressed vegetable matter, mainly tree ferns and giant horsetails, which grew 400 million years ago at a time when the early trees were evolving.

The rock stratas which underlie the soil and vegetation of Britain are a mosaic of the geological spectrum. They represent about fifteen different categories, and Worsley stands close to the junction of two of them. To the south lie the Triassic sandstones, clays and marls, whilst to the north are the Carboniferous limestones, sandstones, shales and coal seams. Coal seams do, of course, extend under Worsley, and some of them have been worked. Still others lie beneath porous sandstone and millstone grit, which are typical of the area, and are unworkable.

Following these brief details of Britain's geology we now arrive at a description of that which underlies Worsley and its woodlands, evidence of which may be seen

in old quarries such as The Delph or where the woodland brooks have carved deep ravines. Shale, sand, marl, boulder clay, millstone grit and sandstone are all to be found here although, in many areas of the woodlands, they are concealed beneath glacial till. The 'spine' of the area consists of sandstone which was laid down about 300 million years ago, during the Upper Palaeozoic era. The most noticeable sweep of this sandstone ridge progresses from Lady Hill on Walkden Road, beneath The Mount, under farm fields, past The Aviary and down to The Delph. Walkden Road passes through a deep cutting in the sandstone which was widened by blasting and excavation in the early 1930s. From that time, and until a few years ago, the road passed between almost bare cliffs of red sandstone. Now, grasses and scrub have become established and conceal much of the rock face. Older residents of the Roe Green area will recall when two alternative routes to St Mark's were described as 'Over the hill' (Crossfield Drive), or 'Through the rocks' (Walkden Road).

Sandstone is comprised of small glassy quartz crystals plus some reddish feldspar minerals cemented together. Common red and brown sandstones are typically stained by iron oxides, largely responsible for the discolouration of the canal in Worsley. They may also be seen seeping into Worsley Brook in the wood below Old Warke Dam.

Boulder clay is a stiff finely ground stoney mass of other rocks, usually containing pebbles and boulders, which has been formed as a ground moraine under land-ice. A prime example of this is to be seen in the sloping cliff which looks down upon the confluence of Wardley and Kempnough Brooks, close to the side of the motorway. As the clay has been eroded, pebbles from as little as a quarter of an inch in diameter to boulders measuring two or three feet across have tumbled into the water below. Within fifty yards of this spot, along the same water-course, shale, sand, pebbles and even blocks of granite can be seen. The latter can be traced back to the Lake District from where it was transported by the great glaciers of twenty to thirty thousand years ago.

Marl, which is clay with a high lime content, was much excavated for use as a fertiliser in the 18th century. Later, as the diggings fell into disuse, the pits became flooded and the area around the outer limits of the woods was pock-marked with ponds. A number are still to be seen, and yet others have been drained and filled in to facilitate building development. About a quarter of a mile to the east, Wardley Wood still contains six ponds. One of these was a spring dam, the others having been either marl pits or shallow coal workings.

Climate

The geological character of the land now having been formed, it was to be re-moulded, shaped and dressed, by the great glaciers of the Ice Ages.

Ice Ages have come and gone periodically for more than two billion years, occurring roughly every 150 million years. What changes to the landscape were made by the earlier glaciations we do not know, but much of the landscape we see today was shaped by the last one. This was at its peak 18,000 years ago, when northern and central Britain were under ice as much as half a mile to a mile thick. At that time, in Canada and Scandinavia, the depth of ice was as much as three miles. With so much water locked up in those great ice-sheets not only were Great Britain and Ireland joined together in one land-mass, but southern England was joined to the continent of Europe by a land-bridge.

As the ice moved southward it carried with it what is known as glacial till. This consisted of rocks and boulders, sand, clay and other soils, which had been 'bulldozed' away from more northerly areas. As the climate improved the progress of the ice-sheet halted, and 10,000 years ago as the melting process gathered momentum, the ice retreated. What a nightmarish scene the newly emerged landscape must have presented then. With no life or vegetation, all that the eye could have seen would have been bare rock, rubble, pebbles, and what soil there was being totally devoid of humus. The scenery would have been an uninterrupted monotone of bleached grey as far as the horizon in any direction. The glacial till which was left behind by the ice, enriched during the last 7,000 years by rotted down vegetation, leaf mould and animal matter, and subjected to the actions of water, frost and bacteria, is what now constitutes the soil of Worsley Woods on the higher ground, above the valley of Kempnough Brook. At the bottom of the valley, along the waters edge where the brook has gouged its way down to bed-rock, can be seen the underlying shale, sandstone, or clay. (The brook and its tributaries constitute the central theme of the woods, not only here but in other pockets of woodland in Worsley. This will be discussed later, but it should be stated now that the woodlands follow the brook rather than the brook running through the woodlands).

At the end of the Ice Age the floodwaters were of such unimaginable magnitude, as the ice melted, that they created the Irish Sea and the English Channel and extended the North Sea to cover that area where the River Thames had once been a tributary of the River Rhine. As the melt waters rushed westward from the higher,

harder terrain of the Pennine region, they followed and deepened the valleys and channels which had been etched out by the movement of the ice. So the rivers and streams that we see today emerged from the Ice Age. They have, during the last eight to ten thousand years, cut deeper and deeper into the terrain, and changed course as they have meandered through the processes of erosion and corrosion. In Worsley Woods, Kempnough Brook is quite drastically under-cutting the steep banks, on the outside of the bends or meanders, and depositing sand and pebbles on the inside of these loops.

Whilst we enjoy a fairly high annual rainfall in this part of the country, it is not uniform throughout the year. During the last sixty years we have experienced many long hot summers and several prolonged periods of drought, the most serious one being in 1946 or 1947 when stand-pipes were placed in strategic locations in Worsley in anticipation of water rationing. Mercifully, the drought broke and substantial rain fell in time to avert this great inconvenience. Throughout all these long dry periods Kempnough Brook and its tributaries have never run dry. The reason for this lies in the nature of their sources, which are in the large water absorbent areas of Walkden, Linnyshaw, and Wardley Mosses. These boggy areas act as giant sponges storing, but releasing in a continuous siphonage, the accumulated rainwater.

Before leaving the topic of climate, mention should be made of the effects on vegetation and animal life caused by the coming and going of the Ice Age. The great ice-sheet advanced as far south as a line roughly drawn from the Severn Estuary to the Humber Estuary and extending down the east coast to The Wash. What vegetation had not already succumbed to the pre-glaciation sub-zero temperatures, would have been 'planed' off by the ice-sheet. The rich fauna, which had included mammoth, woolly rhinoceros, brown bear, arctic fox, wolf, bison and reindeer, either died off or retreated to the more hospitable climes of southern Europe. That southern part of England which was free of ice, was nevertheless so cold (-20c to -30c) that it could only support the kind of vegetation which grows today in the sub-arctic tundra of the North American and Euro-Asian continents. The Britons of the Old Stone Age would have been forced to migrate also, in the footsteps of the animals upon which they relied for sustenance, and also to escape the lethally low temperatures.

As the ice melted and the climate improved, vegetation began to advance northward again, and much of the early flora would have resembled the Alpine plants of today.

The first tree to re-colonise Britain was the birch, followed by the Scots pine, hazel, oak, elm and alder. By the time the seas poured into what is now the English Channel, submerging the former land link with Europe, only thirty-two species of broad-leaved trees, plus three species of conifers and a few shrubs, had become established by natural means. Therefore, of the one thousand and five hundred species which now grow in Britain, the vast majority have been introduced by man - for their fruit, their timber, or their ornamental qualities.

Examples of early colonisers, which can be seen in Worsley Woods today, are birch, oak, alder, wych elm, willow and lime. Prominent among the 'alien' trees are horse chestnut (introduced from The Balkans in the late 16th century), sycamore (the largest of the European maples), and less prominently, the sweet chestnut which was introduced to Britain by the Romans about 2,000 years ago as a food source. From the nuts they made a form of porridge , called 'pollenta' in Latin.

Human Influence - Ancient Woodland

By 5000 BC, over eighty per cent of Britain was blanketed with forest. In fact the only tree-less areas were the high mountain ranges, the sandy coastal strips, and the marshy wetlands. Unfortunately, this great afforestation was only to last for a further 2,000 years. By 3000 BC early man had gradually turned away from being a hunter-gatherer and adopted an early form of agriculture. First Stone Age and then Bronze Age axes, began to clear the forests to make way for stockades and crops. The tough English oaks, however, resisted most attempts at felling them until the Celtic tribes introduced iron to Britain. As the Iron Age arrived, so the clearing of the forests accelerated. The once impervious English oak had been felled so extensively by the time of Elizabeth the First, that laws were introduced to protect it.

As long ago as the Norman Conquest in 1066, so much forest had been cleared that the country had become a patchwork of fields and surviving woods. The process has continued throughout this millennium. Britain's development as a maritime nation brought ever increasing demands for ship-building materials; an increasing population had growing needs for fuel and house building timber; the Industrial Revolution introduced mounting demands for charcoal, used in early iron smelting, and always, it seems, man was able to find a better use for the land which trees

occupied. During the First World War nearly 600,000 acres of ancient forest was felled, and in the Second World War a further 400,000 acres. Now, only nine per cent of the land in Britain is forested, all but one per cent of that being new conifer plantations created by the Forestry Commission. Compare this with the twenty-five per cent forest cover in Germany, and an amazing sixty per cent in Japan.

From the preceding facts, one can recognise the importance of small broad-leaved woodlands such as Worsley's. Nevertheless, Worsley and Wardley woodlands have been diminished by an estimated fifteen to twenty per cent since 1930, by the incursions of the East Lancashire Road, and the M61, M62, and M63 motorways. The threat of yet further motorway construction hangs over them today. Whilst, quite rightly, there is a universal outcry against the current, appalling destruction of the equatorial rainforests, the continuing loss of broad-leaved woodland and hedgerows , in Britain today, is proportionately greater.

Human Influence - Worsley Woods

Despite the fact that the clearance of trees had been in progress for 4,000 years by the time of the Norman Conquest, Worsley - or Workedslegh (one of many spellings) as it was known at that time - was still heavily forested, with wolves, wild boars, and deer roaming freely. There were, of course, areas which had been cleared to make way for crops or pasture, but they would have been to the south and south-west of where the parish church now stands. The total estate of Worsley covered some 15,000 acres at that time. Over the ensuing centuries tree-felling continued, and the forest which had once covered most of Worsley steadily diminished as the demand for agricultural land increased until, as is shown on a map drawn in 1764, little woodland remained. The fields that were created varied in size and were irregular in shape. Size was probably dictated by the fact that large fields, cultivated by a peasant workforce in the employ of a powerful and wealthy landowner, were a viable proposition whilst a tenant farmer, with maybe only his son to help him, would be limited in terms of the area of land he could manage. This theory appears to be given credence by the fact that on old maps, the larger fields are in close proximity to the halls at Worsley, Wardley, and Hazlehurst, whilst the outlying fields are much smaller.

The 1764 map, previously referred to, shows pockets of woodland existing at How

Clough, Wardley, Middlewood, and Rands Clough. It does not show any where Worsley Woods lie today. Nevertheless, it is highly probable that a corridor of woodland did survive along Kempnough Brook and Worsley Brook, connecting with Wardley Wood to the north-east and possibly Alder-forest to the south. Evidence supporting this theory lies, firstly, in one of nature's secret corners of the woods, on the west side of Kempnough Brook and north of the motorway. Here, every spring, before the annual re-incarnation of the heavier flora, wood sorrel and wood anemone flourish. These particular wildflowers are generally accepted as being reliable indicators of ancient woodland. When they have bloomed for their few short weeks, sometime between the middle of March and early May, they disappear as if they had only existed in a dream, very soon to be superseded by a head-high jungle of Himalayan balsam, rosebay willowherb, and rather threateningly of late - Japanese knotweed.

Secondly, when fields were created out of former woodland they required boundaries. In open country these were created by the planting of hedgerows, but when clearing woodland how much more simple to leave some trees standing as a demarcation. On old maps, as in the present day, field boundaries roughly follow the course of the brooks. In the existing farm fields, on either side of the woods, there are remnants of old hedgerows running at right-angles to the course of the brook which include quite mature oaks amongst their mix of trees and shrubs. They too, approximate to other field boundaries as shown on old maps.

Finally, the valley of Kempnough Brook is so wide and steep-sided as to have made it an unattractive proposition for agricultural working. The total clearance of trees in this area would have appeared pointless, and wasteful of time and energy. For similar reasons, the same logic may be applied when considering the survival of smaller woods at Linnyshaw, Spring Clough and Wardley.

The woodland trees today are by no means all of great age. Many of the changes in the arborial nature, the shape, and the dimensions of the woodland, are the results of natural death and regeneration, and colonisation by new species. Much more is the result of human activity in planting, for whatever motive, as if in redress of the destructive excesses of the past. Around 1890, the wooded area to the north of the Old Warke Dam which became known as New Plantation, was created by the 3rd Earl of Ellesmere as a game reserve. At the same time, much supplementary planting took place in that area west of the brook which stretches between Beesley Green and the motorway bridge. The dam had been created around 1790 by the 3rd Duke of Bridgewater at the same time that he instigated the planting of Botany Bay Woods.

This latter area had been reclaimed from mossland over the preceding twenty years. It was this same duke who was responsible for constructing the first major alien feature to invade Worsley's countryside, the Bridgewater Canal. It must be said, however, that the construction of the canal had little, if any, adverse effect on the woodlands.

The next disruption of local serenity was caused by the incursion of the railway. Cutting and levelling and track laying commenced in 1861 at what was to become the site of Worsley Station. Some tree loss would have been incurred at Spring Clough, and further casualties inflicted as construction progressed behind Toad Lane and Roe Green. At this time the course of Greenleach Lane was altered. It had, prior to the coming of the railway, turned sharply to the east about a quarter of a mile south of Roe Green, passed between Egerton Park and Broad Oak, then reached a common junction with Hazlehurst Road and Worsley Road close to the toll-bar. Now, with the advent of a railway station, Greenleach Lane was newly continued in a straight line to meet Worsley Road opposite to the station approach road. That old section of the lane, which had pointed eastward, was renamed Broad Oak Road.

In the early 1930s, the East Lancashire Road was constructed to provide a new and more direct link between Manchester and Liverpool. Apart from cutting a wide swathe through old farmland, this was the first serious incursion into Worsley's 20th century woodland. Wardley Wood, virtually untouched for 400 years or more, was cut in two. Access between the two halves was to become increasingly difficult.

The greatest corporate vandalism of all was perpetrated between 1957 and 1975. This was the period during which the motorway marched inexorably northward from Stretford, eventually expanding into the vast spaghetti junction which exists here today. Hundreds of acres of fields and woodland disappeared under stone, concrete, tarmac and steel. Today, there is hardly anywhere in Worsley that does not suffer round the clock atmospheric and noise pollution. It is almost certain that a further new motorway is to be driven through Worsley, taking up many more acres of picturesque and historical countryside.

The Succession of Ownership

Worsley Woods, contained in the Manor of Worsley, have a recorded ownership dating back to the Norman Conquest. The manor was created by William the Conqueror and granted to one of his favourite knights, Elias, who took the name de Workedslegh. Ownership remained in the name of the de Workedslegh descendants until about 1385.

Between 1385 and 1598 the marriages of inheritrices saw the names of the incumbent families change to Massey, then to Stanley, and to Brereton.

In 1598 ownership passed to the Egerton family, the estate remaining in their hands until the death of Francis Egerton, the 3rd Duke of Bridgewater, in 1803. The estate then passed to George Granville Leveson-Gower, and upon his death in 1833 to Lord Francis Leveson-Gower who, in that same year, changed his name to Egerton. He was created Earl of Ellesmere in 1846. From the time of his death in 1857, Egerton descendants owned Worsley, with the successive titles of 2nd, 3rd, and 4th Earls of Ellesmere, until 1923.

In 1923, suffering great financial pressures, largely due to the heavy burden of death-duties which had been levied against the estate, the 4th Earl sold all his holdings in Worsley to Bridgewater Estates Ltd., a Company which had been set up for this express purpose. Under the new Company's ownership the woodlands retained their private status, the only legal access to the public being restricted to those individuals who were able to purchase an annual pass.

In 1950 the woodlands were purchased by the Swinton and Worsley Amenities Society and two years later transferred into the control of Worsley Urban District and Swinton and Pendlebury Councils. With the re-organisation of local authorities in 1974, the woodlands came into the ownership and management of Salford City Council, and remain so today.

Since 1950, free access has been available to all, whilst in effect little effort had been made to monitor or restrict it since the war years.

The Evolution of Trees and The Woodland Biosphere

We tend to think of plant life, including trees, as being a separate, incidental, and inferior life-form. The truth is that all forms of life, however primitive or sophisticated, have common origins.

The earliest life-forms that we have evidence of, fossilised in rocks for 3,500 million years, are bacteria. The next important stage of evolutionary development was reached with the emergence of algae, their red, brown and green species separated, but derived from a single predecessor. They were joined by their close relatives the blue-greens, and it was to be this latest arrival which would have a most significant influence on the development of life on this planet. Without the blue-greens we and our evolutionary ancestors would never have existed.

Up to this time the earth's atmosphere had contained no free oxygen, although water existed in great quantity with oxygen locked up in its H_2O compound. Algae had hitherto been sustained by absorbing hydrogen from chemical substances present in the plethoric volcanic outpourings from beneath the earth's crust. The blue - greens had evolved, containing a new substance which was to have a most profound effect on the development of future life. This was chlorophyll. The new chemical agent, present today in all green plants, enabled the blue-greens to extract hydrogen directly from water by using the energy of the sun. The process is known as photo-synthesis. The extraction of hydrogen from the water released the remaining element - oxygen. Over countless millions of years, the photo-synthesising activity of the blue-greens enabled an oxygen-rich atmosphere, essential to all life today, to accumulate.

Life remained at this stage of development for an unimaginable length of time, probably two billion years, until about 1,200 million years ago another great advance was made with the development of a single-celled group of life-forms called protistans. Some of these newcomers contained chlorophyll and photo - synthesised their nutrients whilst others, without the benefit of chlorophyll, fed off those which had. From the former, plant life evolved - from the latter, animal life. We are as dependent today as the earliest forms of animal life were, upon plant life for our continued existence. Without plants there would be no herbivores, and without herbivores there would be no carnivores or omnivores.

Both plant and animal life continued to evolve in the seas until the next significant stage was reached. Plant life began to colonise the land some 450 million years ago, to be followed by animal life 100 million years later. About 400 million years ago, primitive land plants began to develop woody stems and to grow taller and taller as they reached towards the light, the source of their energy. Using this energy, they manufactured their food from minerals, carbon dioxide and water.

Most present day plants have leaves, buds, flowers and fruit, but only trees and shrubs have wood. The ability to manufacture wood is contained in a layer of minute cells which lies just beneath the bark of trees and shrubs. This is known as the cambium layer, and each year it produces a layer of new wood on its inner side and a layer of phloem on its outer side. At the same time the cambium layer reproduces itself, and the process continues every year throughout the life of the tree. It is this process which enables the age of a felled tree to be calculated by a count of its annual rings. The word tree defines a method of growth and a way of life, not a species of plant.

Trees were almost certainly the first flowering plants, they are without doubt the largest and oldest living things on earth. In Britain, individual trees may grow as high as 180 feet and have a girth measuring as much as 43 feet. Oak trees may live for as long as 500 years whilst some yews have had twice that life-span. In order to see the real veterans of life on earth, you would need to visit the south-west of the United States of America. There, some of the Californian redwoods are as old as 3,000 years and the bristle-cone pines of Arizona as much as 4,000 years. One Californian redwood is the world's tallest known tree, standing 367 feet and 8 inches high.

In their natural state, free from human interference, trees rarely grow singly. They generate colonies which, depending on their size, are described as either woods or forests. They may be comprised of either a single species or many different ones.

Viewed from a distance, what we see of woodland is a single mass of green, which is a congress of canopies. Walking beneath those canopies, we are mostly aware of a succession of tree trunks of different sizes and varying shades of brown or grey. Closer observation will reveal that within the biosphere of the wood

there are three distinct layers. They are the canopy, the shrub layer, and the ground layer. Each of these is a separate habitat with its own particular group of denizens. There is a fourth area of ecological importance, and this is the woodland edge. Both the ground layer and the woodland edge support grasses and wildflowers, but seldom the same species. Different species have varied requirements of shade, light, moisture and soil types, and therefore a distinct preference for one habitat or the other. Within the woods, very little will grow beneath the dense canopy of beech trees as insufficient light filters through to the ground to facilitate the photo-synthesising of energy. Much more will grow beneath the fragmented canopy of ash trees where, on sunny days, a permanent dappled light may be seen on the woodland floor. The individual preferences of wildflowers for soil conditions and moisture levels can be readily identified by a cursory analysis of the areas in which they are to be found. A variety of plants may thrive in the same area, in a monthly or seasonal succession.

In February and March before the winter has left us, crocus , daffodil, coltsfoot and lesser celandine are in flower. In the early spring, before the trees have given birth to their new foliage, wood anemone, wood sorrel, wild garlic, pink purslane and dog violet all flourish. As the arborial foliage develops and the canopy condenses, the early opportunists are replaced by sturdier species which are more tolerent of shade, such as yellow pimpernel, bluebell, ground ivy, red campion and rosebay willowherb. They are in turn joined or succeeded by Himalayan balsam, great willowherb, and many umbellifers such as hogweed and cow parsley.

There is also a process of succession in the flowering and fruiting of the trees, albeit not as obvious as that of the ground flora. The first signs that we may notice of an awakening in the natural world, are often the blossoming of catkins on grey alder, common alder, and goat willow trees. The first of these may be in evidence in February whilst we are still leaving our footprints in snow or in hoar frost. In March the poplar and wych elm flower, followed in April and May by horse chestnut and oak. The catkins are more noticeable on the earlier flowering trees as they appear before the leaves. On the oak, leaves and catkins appear at the same time, so the latter are not as obvious. The flowers of horse chestnuts, although they appear after the leaves, form huge 'candles' of blossom and are impossible to overlook.

Throughout this chapter no mention has been made of Worsley Woods. However, the naming of plants and trees has been restricted, in the last few paragraphs, to those species which can be seen here in Worsley. It is now time to pass on to Part Two in which we shall look at the flora and fauna of our local woodlands in more intimate detail.

PART TWO - THE PRESENT DAY WOODLANDS

Introductory.

In the 1930's, during the war years and throughout countless decades earlier, Worsley was a far more parochial and insular place than it is today. In those earlier days, when most people were able to trace their family's residence in Worsley back through many generations, the woodlands were known as Bluebell Woods for reasons which are patently obvious each May and June. In the post-war years a boom in house building, an explosive increase in motor-car ownership and greater commuting facilities, gave a more cosmopolitan complexion to the area and insidiously the woods became known as Worsley Woods. This form of identification was applied by the growing number of 'outlanders' and has now passed into common use. Maybe the present name, in its neutrality, is more fair to the woodland's multi-species of wild flora.

This is not one of the largest areas of woodland in Britain by any means. However, it contains a great variety of character which is due in part to man-made intrusions but even more to the varied species supportiveness of differing soil conditions. A glance at the map of the woods shows that they take the loose form of an inverted 'E' which is bisected, in a diagonal line running from south-west to north-east, by the M62 Motorway. This effectively divides them into four main compartments and facilitates the description of them in as many stages. The early progress of this description will follow the course of Kempnough Brook as it flows through the valley, which is largely its own product, passes darkly under the motorway, runs between New Plantation and The Aviary and finally exhausts itself in the Old Warke Dam. To the west of the dam, the lower wood sees the birth of Worsley Brook as it is disgorged from a culvert in a noisy seething of crystal. The stream passes through this compartment of woodland to be swallowed by another culvert which carries it past Worsley Green and under the Bridgewater Canal. It emerges to pass through Worsley Village on its way to Alderforest and ultimately the River Mersey.

Beesley Green to the Motorway Underpass

Each woodland season is characterised by its own particular kind of beauty and points of interest. Successive months within a season offer more subtle refinements and, to the eye of the artistic appraiser, each progressive daylight hour projects a fresh scenography through the ever changing balance of light and shade. Having said this, the favourite season of most nature lovers must surely be the spring. Spring is a time of re-birth and rejuvenation; a time for hope and optimism; a time full of promise.

Should you happen to enter the woods via Beesley Green on a bright and sunny day in May, the very approach to the gateway will present a dramatic sight. Hundreds of square yards of grass will be almost submerged beneath a dazzling white carpet of daisies and, where the Green meets the woodland edge, equally brilliant white clouds of may-blossom will create an ethereal aura around the hawthorn trees. Bisecting these vertical and horizontal planes of eye-straining whiteness, a two feet high terrace of green butterbur leaves, extending along almost the entire side of the Green, will direct your gaze toward that first corner of the woods which is predominately composed of oak, ash and sycamore. The path down to the entrance of the woods descends through a deep notch in the edge of the Green, past the end of the butterbur battlements, and between newly planted rowan (mountain ash), oak and willow saplings. Here too, alas, is Japanese knotweed. This most invasive, stubborn and undesireable coloniser is, at the present time, reaching ever further into the woods. At this same spot, in June, hedge woundwort and stinging nettle flower side by side, the beetroot purple flower spike of the former indicating that it is safe to handle whilst the similarly shaped nettle, with its green flower spike, is best avoided. Flowering here at the same time, close to the timber fence, hedge bindweed sports its large white bell-shaped flowers. It is often, but mistakenly, referred to as convolvulus - a name belonging to the smaller, pink look-alike, field bindweed. Hedge bindweed is in fact a calystegia.

Through the gateway from here are the first of the horse chestnut trees. In the late summer or early autumn, depending on the weather pattern of the preceding seasons, the ground close to this entrance will be carpeted so thickly with 'conkers' that one would be hard pressed to avoid walking on them. For the next five or six hundred yards the path alongside Kempnough Brook passes through the

narrowest strip of the woods, flanked on either side by farm fields. Along the stream and to the west of the path are several mature oaks, hawthorns, elders, and the odd towering ash. The early ground flora on this side of the path consists mainly of hogweed and cow parsley. In June and July figwort can be seen peering out from the edge of the first of several fenced off 'sensitive' areas which exist in the woods today. These are areas which, probably ten to fifteen years ago, were cleared of decaying trees and undesireable invasive species. They were then re-planted with a variety of seedlings or saplings, including willow, alder, and goat willow. This is also one of the areas currently being invaded by Japanese knotweed.

Still in this narrow section of the wood, the east side of the path is worth some mention. On the woodland side of the fenced boundary, where a precipitous cut bank descends from the edge of the farm field, the occasional oak and elder are remnants of a hedgerow demarcation now all but disappeared. As narrow as this bank may be, it still supports through the year a succession of hogweed, red campion and rosebay willowherb. Beyond the fence, the field rises steeply to form a sweeping panoramic dome which creates an early horizon, broken only by the ultimate crowns of distant trees in the curving progression of the expanding woodland. This view is always worthy of a few moments observation but especially so in the summer months when, if you raise your eyes into the sky above the dome of the field, you could well be rewarded by the sight of swifts, swallows or house martins wheeling, gliding and swooping, as they feed off the airborne plankton of flying insects. Passage through the last two or three hundred yards of this narrow section is reminiscent of the leafy country by-lanes of yesteryear.

Now the width of the woodlands increases sharply and options are immediately presented as to the course of ones further progress. It would be adviseable for those 'not as nimble as they used to be', or others guiding a wheel-chair or perambulator, to adhere to the main path which stretches straight ahead and affords a more level surface. At this point there are two recumbent logs which each measure about two feet in diameter and are often used as a temporary resting place by tired ramblers. They are the remains of a crack willow tree which ceased living some ten or twelve years ago, in the impromptu manner for which its species is renowned. As inert as these and many other remains of former arborial glory which lie in various parts of the woods may seem, they are still hard at work within the grand ecological plan. The outer bark has long since crumbled and

returned nutrients to the soil, to be ultimately followed over a much longer time scale by the numerous woody layers. The present skeletons are providing food, shelter and breeding ground, to innumerable insects and invertebrates and hosting the spores of mosses and fungi. Fungi are extremely important to the health of woodland as they and bacteria are the main decomposers of dead matter.

To the east from here and at the boundary of the wood, there stands a stately beech tree which is certainly between 130 and 150 years old, possibly older. A faint track leads past this beech , following the upper edge of the wood, through a concentration of sycamore and horse chestnut trees. The track rejoins the main path in time for a choice to be made between following the route through the motorway underpass or mounting a flight of steps to the left where the path leads past a long line of lime trees to the Linear Park. This junction of paths is marked by a birch tree which is of considerable age for its species. Birches are not renowned for longevity but this individual is between eighty and a hundred years old and, whereas younger birches have typically smooth and round trunks, this veteran has a fluted and somewhat gnarled lower body. This venerable tree stands at a point where, before the catastrophic intrusion of the motorway, a marshy wetland stretched away from the brook in either direction. That permanently damp ground was inhabited by many of the aquatic and amphibious plants typical of bogland flora. The only survivors now, after the massive attention of civil engineers, are a few patches of amphibious bistort and dock. A bridge spans the confluence here of Wardley Brook and Kempnough Brook as they mingle in pursuit of their common destiny. These mingling waters may be crossed (but not after heavy rain) by a flight of stepping stones which form a tenuous link between east and west banks.

On the west bank, a flight of steps achieve an elevation where a high path to the right proceeds through the wood in a reverse direction, eventually crossing a footbridge to that previously discussed place where the willow logs lie. This area of woodland is naturally divided into compartments by the disposition of tree species. To that side of the path where the terrain plunges steeply down to the brook are mature oak, sycamore and hawthorn, whilst to the other side of the path, privet, hawthorn, adolescent beech and wych elm lead towards a magnificent stand of ash trees. This compartment terminates in another of the cleared and re-planted areas. The route of the high path affords a bird's - eye view of the meanders of the brook and its pockets of erosion and corrosion. There is no part of the entire

woods as rich in wildflowers as the one now being discussed. From the end of March to late May, wood anemone, wood sorrel, lesser celandine, bluebell and pink purslane are all in evidence. Red campion persists here from April through to November, whilst bramble and wild raspberry continue to increase their presence. Along the water's edge in June and July, giant hogweed is becoming more prevalent. By far the largest of the numerous species of umbellifers, it can grow to as much as sixteen feet in height and may bear umbels, or flower - heads, up to eighteen or nineteen inches in diameter. Giant hogweed is a dangerous plant to handle as fluid from its stem can cause very painful skin lesions. Finally, from July to October the banks of the brook all but disappear beneath broadly massed phalanxes of Himalayan balsam.

From the Motorway Underpass to Old Warke Cottage

Here lies the broadest area of Worsley Woods comprised of a little visited section to the south-west of the brook and the much larger, more popular section formed by the raised plateau of New Plantation. To the south lies Old Warke Dam. Having emerged from the stone and concrete stretcher that carried it beneath the motorway, Kempnough Brook runs through a high tunnel of a different kind, formed by the dense canopy of mature beech and oak. A few yards into this section of woodland and across a footbridge to the right, assuming the same sunny day in May which illuminated the blossoms of Beesley Green, another dazzling display of a similar hue materialises. The olfactory sense may well be alerted to their presence before they come into view for they are ramsons, otherwise known as wood garlic. Despite their aroma, which is not everyone's favourite perfume, the low and dense mats of small, white, star-like flowers display an ephemeral beauty between April and June. In the latter month, as their flowering and fruiting cycle comes to an end, both flowers and stems shrivel and quickly decompose. Hard packed soil closes over the place where they had been, the secret of their bulbs' subterranean existence safe until the following spring. Rising steeply to the left of this spot, a secondary path leads out of the wood and continues between a farm field and the private grounds of The Aviary. Eventually that path gives access to the lower wood, which will be discussed later.

Back on the east side of the brook, the main path continues on its way to Old Warke Cottage and the dam. Despite the fact that the path negotiates a couple of bends, which are sharp enough to obscure all that lies beyond them at ground

level, its entire length is brooded over by the awesome towering presence of the magnificent beeches which were eulogised earlier. On the opposite side of the path, between it and the brook, the ground is rather low and swampy. Oak, willow, elder, two or three of the surviving crack willows and at least one Norway maple are to be found here. Along the banks of the brook is a stand of alders which, in the winter months, is central to the activity of a flock of siskins. Alders are the only cone-bearing broadleaved trees in Britain. The cones with their corky outgrowth have evolved to keep the seeds afloat on water, which is the natural vehicle for their dispersal. In addition to siskins, alders attract coal tits and treecreepers, all of which are well adapted to extracting the fruits from within the cones. Nodules on the roots of these trees contain bacteria which can extract nitrogen from the air and 'fix' it, compensating for the usual lack of nitrogen in wet soil. They are useful trees in preventing the erosion of the banks of rivers or streams and also in enriching poor quality soil. According to ancient belief, evil lurked in the alder. The cause of that superstition may well lie in the fact that when alder wood is cut, it adopts a blood-orange tinge as if bleeding.

As the alder and its cones attract certain birds, other birds and diverse life forms are attracted to different trees according to the wealth of fruit or insect life they support. In the latter respect, the most productive tree is the oak which is host to 284 kinds of invertebrate including almost 200 species of moth and butterfly. It is the caterpillars of the latter and the grubs of such flying insects as the gall wasp which wreak havoc with the foliage of the oak. The new season's leaves unfold rather later than some other trees, then they develop quickly in order to photo-synthesise the energy requirements of the parent tree before being shredded by their attendant invertebrates. Most people are familiar with 'oak apples' but they are only one of six kinds of gall which affect oak trees through the year. Small currant galls are to be found on male catkins in the spring, whilst later, spangle and cherry galls are seen on the developed leaf. Oak apple galls and marble galls are found at the bud junctions of twigs. The former, large soft and spongy, appear in the spring and gradually rot away whilst the latter, somewhat smaller and darker in colour, persist throughout the winter. Most of these abnormalities are caused by various species of gall wasp. When the female lays her eggs on the host tree she leaves behind a quantity of a substance similar to the tree's own growth hormones. This causes the cells of the tree which are closest to the eggs or developing larvae, to grow abnormally and out of the

tree's control. The new growth provides a home for the larvae which are protected within a series of chambers.

Before this woodland description progresses into New Plantation, a final word about beech trees would now be pertinent. Whilst not as magnanimous a host as the oak, the beech is home to almost 200 invertebrate species. This compares favourably with the ash, which supports 25 species, the sycamore 15, horse chestnut 5, and the plane tree only one. Perhaps, in ecological terms, the beech's support of animal life goes some way towards balancing out its dicouragement of basement flora, for little is able to thrive at ground level beneath its dense canopy. The lifelessness of the ground beneath beeches is not only due to the lack of light, but a shortage of moisture also. Tight leaf formations trap rainwater which often evaporates without ever reaching the woodland floor and such moisture as does reach the soil is quickly used up by the tree's spreading rootlets. The only plants which are able to survive in these conditions are called saprophytes. These are colourless as they lack the green chlorophyl necessary for photo-synthesis, drawing their nutrients instead from dead organic matter such as fallen leaves and beech mast.

Over the crest of this beech dominated slope, New Plantation levels off into the largest and most isolated section of the entire woodlands. Amongst the dense vegetation all contact with urbanity is severed, with the exception of an audible drone emanating from the motorway and even this can become un-noticed through familiarity. Certainly wildlife seems to have adapted to the constantly intrusive sound. Whilst some central areas are currently fenced off into rectangles of sensitive regeneration, paths around and between them are adequate and most of the natural flora can be approached to within a few yards. Until about thirteen or fourteen years ago this area was almost completely overrun by a massive concentration of rhododendrons. As part of the City of Salford's management activities at that time, a little over three-quarters of these over-invasive shrubs were eradicated. The remaining shrubs, close to the motorway in the north-west part of this area, have deliberately been allowed to remain for their sound absorptive qualities.

In the southern corner of this section sweet chestnut trees are to be seen, their only other location being on the high rise which overlooks the eastern side of the dam. More beech and sycamore abound here, plus a number of birches. Several of the latter are in less than good health for reasons which remain open to conjecture. Fungal attack could be the cause but it is also an established fact that the birch

is among the first of tree species to become the victim of acid rain.

Crocus and daffodil have been planted here and whilst they present a colourful sight in spring, they cannot truly be counted as wildflowers. Golden-rod flowers naturally here in a period between June and September and down the slope, on either side of the main path, enchanter's nightshade blooms at about the same time. Apart from these and the ubiquitous willowherb and Himalayan balsam, the area is not species-rich in tems of wildflowers. It is, however, rich in bird life and mammalian activity but these will be dealt with later and separately.

At the southern extreme of this section, Kempnough Brook veers sharply to the right and widens into a terminal estuary as its waters disperse undramatically into the Old Warke Dam. The footpath continues in a south-easterly direction for a further fifty yards or so beyond the point where the brook deviates in pursuit of its surreptitious demise. Through a gateway by the side of Old Warke Cottage further directional options present themselves. Turning sharply to the left, a narrow path leads to the Linear Park and beyond it up a flight of steps to Greenleach Lane at the latter's junction with Broad Oak Road. Straight ahead a pathway, wide enough to give vehicular access to the cottage, passes along a wooded high rise and through another gateway to the junction of Sefton and Woodstock Drives. This small wooded area contains little in the way of trees which have not previously been described. It does, as has already been pointed out, contain some sweet chestnut trees. The only wildflowers to be seen here but not elsewhere in the woods are garlic mustard and wood forget-me-not, both of which are in flower between April and July. The third and final option is to follow the path which runs south-west along the southern section of this thematic watercourse, now taking the form of the wider waters of the dam.

Along the Old Warke Dam

When, in the past, the woodlands were privately owned and the public denied access, this half-mile of footpath linking Broad oak Road with Mill Brow always constituted a public right of way. For almost half its length the path looks down upon the waters of the dam and the attendant water-fowl. The view from the path is offered somewhat intermittently through gaps in the dense foliage of trees and shrubs which grace the downwardly inclined bank. The crown of this towering hedge is made

up of willow, alder, birch, sycamore, poplar and mature oak, whilst at eye level there is a screen of holly, elder and rhododendron. Roughly a quarter of the way along the dam there is a sturdy timber observation platform which gives a 'tunnel vision' view across the water towards The Aviary. At the 'off-shore' edge of this platform, alders loom over the water on its right-hand side whilst to its left a mature birch with five 'trunks' rising from a common base about two feet above the ground proclaims that it was coppiced early in life. More or less straight ahead and about twenty or thirty yards out into the water, vision is further obscured by the living 'carcase' of a crack willow which fell down into the dam several years ago but continues to produce shoots and leaves, deriving energy from sunlight and nutrients from silt on the bed of the dam and the surrounding water. Despite the limitations which are imposed on vision, this is nevertheless the most advantageous point from which to observe the resident water-fowl or simply to feed the ducks. The avifauna here is quite interesting and varied, but will be described in a separate section dealing with the woodland birds in general. At the lower and deeper end of the dam, where the water presses against the landscaped retaining wall, there is a second observation area where seats are surrounded by a flagged floor and stone plant containers. This was created a few years ago as a memorial to the late John Prestwich, a former occupant of The Aviary. From here, not only is there an uninterrupted view of the full length of the dam, but a fascinating panorama of the tree-lined shore sweeping down from the grounds of The Aviary and melting into the distant hazy canopy of New Plantation. Immediately below this platform can be seen the circular sluice, known locally as 'the twirl hole', where the surplus water of the dam is noisily decanted into a culvert which carries it underground for several hundred yards before its reincarnation in the lower wood as Worsley Brook.

The Lower Wood

This pocket of woodland opens up immediately below the retaining wall of the dam, extends southward to where it meets the rear gardens of cottages in Mill Brow, and is bounded on its west side by the service road leading from Walkden Road to The Aviary. Descending a flight of steps, a path leads alongside the culvert's exit and traces a rectangular course through the wood. The southern leg of this path is reasonably dry, being carried over the wettest area by a long board-walk, but the northern section is wet and muddy except in the longest spells of fine weather.

Throughout the central area the ground is quite marshy and carries a number of seepages into the brook which are heavily stained by iron oxides. Just as there is a feeling of elevation in New Plantation, so here there is an awareness of being in the 'basement' of the woods. So many of the trees here are of the same species that are to be seen elsewhere in the woods that to describe them would be unnecessarily repetitive. There are however, a few individuals worthy of comment. Two or three black poplars are of considerable age and there is another poplar at the lower end of this wood, with a large buttressed and fluted trunk, which may well be an ancient Lombardy poplar. Its earliest branches are so high above the ground that its leaves mingle with, or spread above, the canopies of neighbouring trees, which makes positive identification difficult. Close by are two or three Norway maples which probably represent half the number of their species which exist in the entire woodlands. In the spring there is more pink purslane to be seen here than elsewhere in the woodlands and throughout the summer Himalayan balsam is again the dominating flower. In the north-east corner of this compartment a further flight of steps leads to an exit by the main gate of The Aviary. Westward from here, the service road leads through a motorway underpass and alongside a small triangular fragment of woodland which lies between the churchyard and St Mark's School. This small section of the woods contains little of unique interest. The final section of the woodlands proper, lies to the north of the school.

From St Mark's School to The Motorway

The footpath leading to this final section skirts the school grounds within which a large weeping willow is worth observing. From where a corner of the school grounds approximates to the juction of Aviary Road and Crossfield Drive, alternative footpaths run due east through the woods. One of these marks its southern boundary whilst the other runs inside its northern one, meeting each other at the side of the motorway. Along the southern path, close to its boundary with the school grounds, crack willows of no great age lean precariously in deference to the prevailing wind. Given the brittle nature of these trees, it is most unlikely that they will remain upright into old age. On the opposite side of the path are more alder, oak, and willow trees. An early diversion towards the path on the northern side of the woods passes a small but charming pond which, long ago, was in all probability a marl pit. On the woodland side of the pond, two bench seats offer secluded and contemplative rest to the rambler. At certain times of year the odd coot or moorhen may be seen here. The landscaped garden of a private house provides an attractive backdrop to the far side of the pond. As the path continues from here

through a now familiar mix of broadleaved trees and shrubs, it spasmodically offers distant glimpses, across a farm field, of the first section of these woods to be described. Emerging from the wood by the side of the motorway, the path then runs parallel to it for about an eighth of a mile before leading back into the Beesley Green to M62 section of woodland, at a point overlooking the confluence of Wardley and Kempnough Brooks.

The foregoing descriptions of the woodlands, section by section, have become progressively shorter in order to avoid unnecessary repetition in the naming of species and also because the parcels of woodland being described have become smaller too. There is now an area outside the woodland boundary to be considered, one which supports up to eighty per cent of the local wildflower species.

The Linear Park

There is a rare exhilaration to be experienced in an area which has been given back to nature, after a long period of its catering for man's industrial or transportational demands, and the Linear Park is a fine example of such welcome and successful remission.

In 1861, as the railway probed westward from Manchester, the 2nd Earl of Ellesmere ceremoniously dug out the initial sod which announced the coming of the first noisy intrusion into Worsley. (The first motor-car was not to take to the road for a further twenty-three years). This construction, known then as The Manchester and Liverpool Railway, delved past the eastern edge of Worsley Woods where it was to function for roughly a hundred years until the Beeching rationalisation of the railway system brought about its closure. Following its abandonment by British Railways, this deeply scarred trough went through a period of dereliction tempered by a certain amount of natural regeneration. Opportunist grasses, shrubs and wildflowers, explored where dual pairs of steel rails had reigned for a century. Ragwort and willowherb, in all likelihood introduced by rail traffic in the first place, extended their territories, whilst woodland and urban birds mingled in this common addition to their natural habitats. What is seen today is partially the result of natural regeneration, but much more is the product of highly commendable work carried out by employees of the local authority. The levelling and soft paving of a substantial walkway, planting of trees and shrubs, sowing of wildflower seeds, and the erection of boundary fences and gateways, are

all to the credit of the then Recreational Services Department, currently titled Arts and Leisure Department, of the City of Salford. Much of the denser areas of new tree plantation consist predominantly of goat willow, birch and alder, but in the more open areas there are, among other species, white poplar, cherry, grey alder, dogwood, and a variety of wild briars, all now beginning to mature into their second or third decade of life.

Two or three Buddleja bushes grow on the eastern bank of the park, and they are always a valuable asset to the natural world. Named after Adam Buddle, a famous botanist who died in 1715, they were first introduced into Britain from China in 1896. Known also as the butterfly bush, Buddleja has become more established in gardens, building sites and wastelands, than in open country. The purple or orange flower spikes are visited by almost all the country's native species of butterfly and, here in Worsley, almost twenty species are attracted by them. The more obvious ones are large and small whites, peacocks, red admirals, small tortoiseshells, and in years when large numbers migrate northward, painted ladies. Quite an intricate web of life surrounds this bush, through a succession of prey and predator. Aphids attract the attention of ladybirds and hoverflies, the larvae of the latter often becoming the victims of certain wasps which lay their eggs within the living bodies. All are the likely prey of spiders or birds. Invertebrates constitute ninety-five per cent of the earth's animal life and insects, of which Britain has about 20,000 species, outnumber all other fauna by four to one.

Large areas of the former railway embankment are covered by brambles which, at the end of the summer, provide many local people with rich pickings of blackberries. Birds, especially thrushes and blackbirds, find their own sufficiency of the fruit in places inaccessible to reaching human hands. One of the disadvantages of brambles and their relentless invasiveness is reflected in the fact that one of the two patches of yellow pimpernel, which existed close to where the brook runs beneath the footpath, appears to have succumbed to their suffocating blanket.

Dog violets flower in one shady place during March, whilst in April common vetch is much in evidence and is joined a month later by meadow vetchling, birdsfoot trefoil, hop trefoil, and red and white clovers. Tufted vetch flowers here from June to August as does marsh woundwort. From July to September, broad leaved helleborine and at least three different species of willowherb are to be found,

alongside red bartsia and common fleabane. Arguably the most attractive wildflowers to be seen along the parkway are meadow cranesbill and purple loosestrife, the latter flowering well into September. So many wildflowers now grow within this corridor that the naming of them all, with descriptions, would occupy many pages. In an appendix to this text approximately 150 species are listed, common and less common. The list contains only those which have been observed and identified by the writer, but new observations are constantly being made. Different species of wildflowers require varying degrees of light or moisture, which is why such a variety exists along the Linear Park where conditions range from deeply wooded places to wide-open shadeless areas and from marshy water traps to sloping well drained habitats.

Close to the steps which lead up to Alfred Avenue, screened at one end by a tall colony of common reeds, there is a pond which, nowadays, will only retain water during prolonged wet periods. Unfortunately, it usually holds water at the time of year when frogs are spawning and receives an annual donation of spawn. As warmer weather follows, the pond dries out, bringing a premature end to the lives of the developing tadpoles. Further west, opposite to another flight of steps which this time lead to Roe Green, there is another pond which so far has never dried out. This pond literally abounds with life, in a variety of forms. It has for many years been the breeding ground of smooth newts, which can be observed throughout each spring and early summer as they periodically rise to the surface in order to acquire a fresh intake of air. Water beetles, pond skaters, and water boatmen abound on the surface of the water, whilst above it, banded damselflies flutter, hover and mate, occasionally pausing to dip their tails or mouth-parts into the water. Several species of dragonflies, including common and brown hawkers and broad-bodied chasers, are to be seen around the pond and and the tall grasses which surround it. Meadow browns are predominant amongst the many species of butterflies which frequent these same grasses, while cinnabar moths favour nearby clumps of ragwort.

So far the description of wildlife has been limited to those forms which are either static or always to be seen at the same locations. It is now time to look at those other life-forms, the presence of which is not as constant or predictable. They are mammals and birds, and will be discussed in that order.

Woodland Mammals

The area is not as rich in mammalian life as many other parts of Britain, nor is Britain inhabited by as many species of mammal as most other European countries, but about a dozen species are to be found in these woodlands. Observing mammals is no simple matter, most encounters being either accidental or the result of enlightened and patient effort. With a well justified mistrust of man, those animals which have not adopted a nocturnal way of life tend to adhere to a crepuscular one. A notable exception is the squirrel, its tree-top agility making it safe from all except those humans who flout the firearms law.

Reports of local badger sightings are less than numerous but, as a dead animal was found between two lanes of the motorway in 1989, they must be assumed to exist. Cruelly persecuted by a few, but loved by many, the badger is Britain's largest carnivore. Its maximum 32 inches length is less than the 48 inches of a fox, but the latter measurement includes almost 20 inches of tail. The badger weighs up 38 pounds compared to the fox's maximum of 21 pounds.

The sight of a fox is not unusual to anyone who visits the woods around first light. Like most mammals, foxes are creatures of habit and tend to use the same routes through their territories, which may cover half a square mile. Whilst an early morning encounter is likely to be with a resident fox as it returns from a night's hunting or courting, in the autumn a stray young fox may be seen which has left its family unit to seek an unoccupied territory of its own.

Stoats and weasels are not an uncommon sight, even in daylight hours, along the boundary between the Linear Park and New Plantation. The stoat is the larger of the two species, with the male of each being larger than the female. As a female stoat is about the same size as a male weasel, the most reliable point of identification is the black-tipped tail of the stoat. Both are very successful predators, living largely off rabbits, mice and voles, but are also good climbers and frequently raid birds' nests in trees.

Few people ever see live shrews and yet both common and pigmy shrews abound here. The latter is Britain's smallest mammal, with a body length of no more than two inches. These small brown animals, with their distinctive elongated snouts, are extremely active creatures. They feed voraciously on invertebrates but, as they are incapable of storing body fat, they are constantly seeking the next meal. In fact, a shrew can die of starvation if it is forced to go without sustenance for more than four hours. In the summer and early autumn, dead shrews are a

frequent sight on woodland paths, where they have died of 'old age'. Seldom is the life span of a shrew longer than twelve months, but often shorter. The most obvious identification feature of the two species apart from size, (the common shrew can be up to three and a half inches long), is the length of tail. This is equal to about three-quarters of the head and body length in the case of the pigmy shrew, whilst that of the common shrew measures half the length of its head and body. Damp woodland such as Worsley's is the shrew's preferred habitat.

The water vole is a rather stocky animal, often mistakenly referred to as a water rat. Similar in size to rats, water voles are to be found in or around lakes rivers and streams, where they create distinctive burrows close to the normal water line. The burrows usually have two entrances, one below and one just above the water line, which are used with equal facility as these animals are most adept in the arts of swimming and diving. Their activities may be observed in the daytime, often along the final stretches of Kempnough Brook where the water is deeper and more slowly running.

Brown rats are notorious scavengers and have established a colony in the banks of the brook, between Greenleach Lane and the Linear Park as it runs between the allotments and the motorway, an area which has a sizeable accumulation of litter. Whilst their presence there is obvious, they exist less conspicuously in other parts of the woods. They are one of several predators which constitute a serious threat to newly emerged ducklings and the chicks of other water fowl.

Hedgehogs roam through the full range of habitats which the area offers and, shortly after nightfall, are as likely to wander across the open expanse of nearby Roe Green as to rummage about in the deep undergrowth of the woods. It is possible on occasion, to see a lone hedgehog ambling unconcernedly along a main path in the woods during daylight hours. The proximity of heavy human footsteps or the unwelcome approach of a dog, will cause it to roll into a well armoured defensive ball. The diet of this animal is quite varied, including insects, slugs, snails , mice,frogs and berries. It can be a distressing experience to discover a hedgehog which is suffering a slow, agonising death, due to having taken garden slugs which have themselves been the victims of chemical slug pellets.

Another extremely unpleasant experience, which was not uncommon a few years ago, was to encounter a rabbit which was hobbling along, deaf and blind, as it searched

feebly for water whilst suffering the terminal stages of myxomatosis. This virulent and obscene disease had largely been re-introduced into the rabbit population by man in an attempt to reduce their numbers, because they inconvenienced him or reduced the profitability of his land. Happily, the local rabbit population is in a healthy condition again. Population recovery is never long in arriving, as the does with a gestation period of about four weeks and an average litter of five or six young are able to conceive again immediately after giving birth. They produce between five and seven litters each year.

The most noticeable mammal throughout the year, and at all times of day, is the grey squirrel. Over the last ten years or so the Worsley Wood squirrels have manifested a population explosion. Also, wherever there is a tree-lined route, they have extended their activity into spinneys, copses and gardens. The grey squirrel was introduced into Britain from North America at the beginning of the present century, just as the native population of red squirrels was being drastically reduced by disease. The greater size and aggressiveness of the grey squirrel favoured it in the competition for food, until nowadays much of the broadleaved woodland of lowland England is devoid of red squirrels. The latter still thrive in Scotland and in pockets of pine forest in northern England, and spasmodically in Norfolk, Isle of Wight and Brownsea Island. This species is far more adept than its grey cousin at liberating the fruit of pine cones, of which it may take 100 or 150 in a single day. Our local grey squirrels feed on acorns and other tree fruits, leaves, fungi, and in spring, the juicy tissue from beneath the bark of trees. Sadly, they also take the eggs of woodland nesting birds.

Wood mice and dormice dwell largely unseen in and around the woods, as do noctule and pipistrelle bats. There are over 4,000 species of mammals world-wide, and so numerous are the species of bats that they account for almost a quarter of that number. In Europe alone, there are 33 species of bats which represent 16 per cent of the total mammal fauna of the continent.

Approximately eighteen months ago, several people reported seeing a deer in the woods over a period of two or three days. This had presumably escaped or roamed from a deer park several miles away. After a report of a deer being destroyed in a housing estate near Bury, no more local sightings were reported.

Woodland Birds

There are around 8,600 species of birds in the world and their history goes back over 140 million years, roughly 135 million years before man's earliest hominoid ancestor attempted to walk on two legs. Birds have long been special objects of man's fascination, possibly out of his envy for their freedom of flight and freedom of movement, and today bird-watching is the ardent pastime of millions of people the world over.

Of the 62 bird species listed in the appendix, five or six have been short term or accidental visitors which may or may not be seen here again. The remainder can all be seen here, either at the appropriate time of year or at all times in the cases of permanent residents.

The sighting of songbirds, tits, or birds of prey, in the greater area of the woodlands, is very much a matter of chance or the result of perseverance. On the other hand, the observation of dabbling ducks and divers on the Old Warke Dam is guaranteed. As narrow as the field of vision may be from the timber-built platform, it concentrates on a great number of water-fowl for most of the day. Mallard, coot, moorhen, little grebe and over-wintering teal are supplemented by daily visits from the odd grey heron or common sandpiper. The dam has also received short-term visits, lasting two or three days, from Canada geese, pochards and mute swans. Mallard, the ancestor of nearly all farm ducks, is the predominant species on the dam and the most prolific producer of young. The female mallard lays from seven to twelve eggs, often under hedges or bushes away from the water, and it is not unusual for the whole clutch to hatch out successfully. The ducklings are led onto the water by their proud mother, where their early life is less than secure as they face an array of predators such as pike, rats, stoats , weasels, foxes and birds of prey. A regular observer of life on the dam may be quite dismayed to see a brood of twelve ducklings reduced, day by day, until only two or three survive. It is not unique for the entire brood to become the victims of predation. The female alone incubates the eggs and rears the young, during which time the drakes socialise in all male company and go into their season of moult.

The little grebe, or dabchick as it is also known, lays from four to six eggs but it is unusual to see more than two or three young appear on the water. They nest among reeds and bulrushes, on a platform which they construct from water weeds.

Both parents incubate the eggs and care for the young, even carrying them on their backs. Smaller broods and more attentive parental care, gives young dabchicks a better chance of survival than mallard ducklings. They are superb and habitual divers, sometimes disappearing completely from view as they dive long and deep, not surfacing again until they reach a clump of reeds or an overhang of the bank.

Several coot reside on the dam and they are readily identified by their all black plumage, with their bill and forehead shield being a sharply contrasting white. Their young, though tiny, are conspicuous by their almost completely red head and neck. They build floating nests, usually amongst water plants. The coot is gregarious but given to quarrelsome chases and, like the dabchick, it dives in search of its food. Unlike the dabchick, the female alone takes responsibility for rearing the young.

Similar in size to the coot is the moorhen, distinguished from the former by a browner plumage and a red frontal shield and bill. Both parents incubate and rear the young, but nevertheless, from a clutch of six to ten eggs it is unusual to see more than three or four chicks in a surviving brood.

Of undeterminate colouring, but mostly white or of light hues, feral ducks mingle happily with the other permanent residents.

As mentioned elsewhere, teal have for several years spent the winter on the dam. They are far more shy than the other resident species and are glimpsed rather than observed as they skulk among the reed beds or between the islets of silt. They are distinguished from mallards by their smaller size and the metallic green of their specula. We are never to see their young, unfortunately, as their breeding grounds extend overthe former USSR, Eastern Europe, Scandinavia, and the northern extremes of Iceland.

Regular or prolonged attendance at this vantage point by the side of the dam is likely to be rewarded by that sudden flash of electric blue which signals the fleeting passage of a kingfisher. This, the most brilliantly coloured of all British birds, plies regularly along the entire length of the woodland's watercourse. It nests in holes intruding into the steep banks of the brook, which is the main artery of its territory. An especially rewarding but more rare experience, is to see a kingfisher perched on the iron railings which surround the 'twirl hole' at the bottom end of the dam, prior to making a plunging dive into the water in pursuit of a fish.

Another colourful bird which largely adheres to the same aquatic corridor as the kingfisher is the grey wagtail. The name of this bird does scant justice to its eye-catching plumage. Whilst its back and head are blue-grey, its underparts are a brilliant yellow and its rump a yellow-green. When observed standing on a rock or log in the middle of the rushing stream, it confirms its membership of the wagtail family with a rythmic up and down movement of its long tail. Its close relative the pied wagtail is also an extremely attractive bird, despite its colouration being limited to black and white. It is the distribution of these two colours which is responsible for its handsome appearance. The throat and bib, top of the head, back and upper tail feathers are black whilst the underparts, cheeks and forehead are white, as are alternate edges of its wing feathers. The pied wagtail, unlike the grey species, prefers different habitats in summer and winter. During the summer months it stays close to fresh water and may often be seen on the mud flats of the dam. In the winter its preference is for agricultural land and open grassland and it becomes a common sight on Roe Green.

Prominent among other species which are present all the year round are robins, chaffinches, wrens, magpies, jays, treecreepers, nuthatches, and several species of tits. Great spotted woodpeckers can be seen at all seasons but attract attention particularly in the spring, when the loud drumming noise of their nest-hole excavations echo around the still unfoliated woods.

Summertime brings the migratory songbirds back to the woodlands, but few people are fortunate enough to see the willow warbler, chiff-chaff, wood warbler or sedge warbler, which breed and rear their young amongst the dense foliage. Some species of warblers are so similar in appearance that they can only be told apart by a slight difference in the colouration of their legs. The most reliable method of identification is to become familiar with the song or call of each species. The easiest of all the warblers to identify in this way is the chiff-chaff, the name of which is an onomatopoeia of its repetitious call.

The less gentle side of nature is represented by birds of prey such as the kestrel and sparrow-hawk which constantly scan the canopy, woodland edge and nearby fields, in search of an opportune meal. Whilst these predators take mostly small birds, the killing of which is fairly instantaneous, they also take prey up to the size of blackbirds and magpies. It is not a pleasant experience to see a blackbird, still fluttering and screaming, being carried away to a sparrow-hawk's plucking post.

Whilst a sparrow-hawk will certainly take and kill a solitary magpie, the latter is a gregarious species and seldom to be seen without the company of others of its own kind. Once aware of the presence of a large bird of prey, magpies will immediately band together in numbers of eight or ten and 'mob' the threatening invader until it retreats from their territory.

Bird-watching is much more rewarding here amongst the denuded trees of winter, when siskins, favouring the alders along Kempnough Brook, and large multi-specied parties of tits supplemented by endearing little goldcrests, flitting busily from tree to tree in New Plantation, are so easily observed.

The woodlands are somehow more enjoyable and fulfilling when birdsong is at its most voluble and varied. Just as trees are the body of woodland and wildflowers its complexion, so birds are its spirit.

EPILOGUE

A short work like the foregoing cannot provide full enlightenment in respect of the subjects it touches upon. It cannot comprehensively list or describe all the life forms existing within the area which is its subjective theme. Moreover, the reading of it alone cannot sufficiently impress the reader with the feeling of pleasure and sense of involvement, which come from an in-depth understanding and appreciation of the natural world. Hopefully, what it may do is to arouse an interest in studying elsewhere, in greater detail, some of the topics which were essential to the first half of this text. It is further hoped that the second half will encourage readers, who are not already nature-watchers, to be more observant in the course of strolls through their local countryside and through resulting enjoyment and increased awareness, to expand their love and respect for the natural world.

We would do well to remember that we do not stand above or outside nature, but that we are a humble component of it and a recent episode in its evolutionary process. Our very existence is dependent upon the continued well-being of our environment and our fellow members of the earth's ecological system. On the other hand, no other form of life would be diminished by our disappearance from the earth. Quite the contrary !

The prologue contained a quotation from Coleridge and another one from the same poet seems a fitting conclusion to this epilogue :

" - He prayeth well who loveth well
Both man and bird and beast,

He prayeth best who loveth best,
All things both great and small:
For the dear God, who loveth us,
He made and loveth all".

APPENDIX

The following is a record of those wildflowers, trees, shrubs, mammals and birds, which have been observed by the author within the area that this book describes. It is not claimed that this is a comprehensive list of the area's flora and fauna.

Wildflowers

Wood anemone
Wild angelica
Red bartsia
Bistort
Amphibious bistort
Sweet briar
Bittercress
Hairy bittercress
Broom
Himalayan balsam
Field bindweed
Hedge bindweed
Bluebell
Bramble
Brooklime
Bulrush
Butterbur
Creeping buttercup
Bulbous buttercup
Meadow buttercup
Norwegian cinquefoil
Common comfrey
Cuckoo flower
Small-flowered cranesbill
Perennial cornflower
Red campion
White campion
Greater celandine
Lesser celandine
Common chickweed
White clover
Red clover
Meadow cranesbill
Cornflower
Crocus
Daffodil
Daisy
Dandelion
Lesser dandelion
Dock
Common duckweed
Common fleabane
Wood forget-me-not
Foxglove
Feverfew
Common figwort
Garlic mustard
Golden-rod
Ground ivy
Groundsel
Rough hawkbit
Lesser hawkbit
Autumn hawkbit
Leafy hawkweed
Hogweed
Giant hogweed
Hyssop
Broad-leaved helleborine

Wildflowers (continued)

Herb Bennet
Honesty
Yellow iris
Black knapweed
Japanese knotweed
Lady's smock
Lady's mantle
Great burnet
Salad burnet
Coltsfoot
Lily of the valley
Little robin
Purple loosestrife
Yellow loosestrife
Lords and ladies
Mare's tail
Marsh marigold
Common meadow-rue
Michaelmas daisy
Meadowsweet
Montbretia
Hedge mustard
Pineapple mayweed
Stinging nettle
Deadly nightshade
Enchanter's nightshade
Nipplewort
Dwarf pansy
Pignut
Pale persicaria
Common poppy
Arctic poppy
Cow parsley
Yellow pimpernel
Buckshorn plantain
Greater plantain
Hoary plantain
Ribwort plantain
Broad-leaved pondweed
Pink purslane
Large-flowered evening primrose
Ragged robin
Ragwort
Oxford ragwort
Ramsons
Raspberry
Redshank
Common reed
Common rush
Field rose
Dog rose
Devilsbit scabious
Snowdrop
Common sorrel
Wood sorrel
Star of Bethlehem
Common storksbill
Tansy
Wild turnip
Creeping thistle
Tormentil
Birdsfoot trefoil
Narrow-leaved birdsfoot trefoil
Hop trefoil
Tutsan
Common vetch
Tufted vetch
Meadow vetchling
Common dog violet
Early dog violet

Wildflowers (continued)

Yellow water lily
Great willowherb
Rosebay willowherb
Broad-leaved willowherb
Hedge woundwort
Marsh woundwort

Trees and Shrubs

Common alder
Grey alder
Crab apple
Common ash
Mountain ash
Common beech
Downy birch
Silver birch
Buddleja
Wild cherry
Flowering cherry
Horse chestnut
Sweet chestnut
Elder
Wych elm
English elm
Fir
Guelder rose
Hawthorn
Common hazel
Wych hazel
Holly
Hornbeam
Honeysuckle
Laburnum
Larch
Cherry laurel
Portugal laurel
Spotted laurel
Lilac
Common lime
Small leaved lime
Magnolia
Field maple
Norway maple
Monkey puzzle
Pedunculate oak
Sessile oak
Turkey oak
Common pear
London plane
Grey poplar
Black poplar
White poplar
Lombardy poplar
Western balsam poplar
Oval leaved privet
Rhododendron
Snowball tree
Snowberry
Stag's horn sumac
Sycamore
Whitebeam
Goat willow
Crack willow
White willow
Golden weeping willow

Mammals

Red fox
Stoat
Weasel
Common shrew
Pigmy shrew
Water vole
Rabbit
Brown rat
Hedgehog
Grey squirrel
Wood mouse
Dormouse
Noctule bat
Pipistrelle bat
Badger

Birds

Blackbird
Blackcap
Bullfinch
Chaffinch
Chiffchaff
Coot
Carrion crow
Cuckoo
Dipper
Collared dove
Fieldfare
Goldcrest
Canada goose
Little grebe
Greenfinch
Goldfinch
Black-headed gull
Herring gull
Common gull
Grey heron
Jackdaw
Jay
Kestrel
Kingfisher
Magpie
Mallard
House martin
Moorhen
Nuthatch
Brambling
Barn owl
Tawny owl
Partridge
Woodpigeon
Pochard
Robin
Rock
Common sandpiper
Siskin
Snipe
House sparrow
Hedge sparrow
Tree sparrow
Sparrowhawk

Birds (continued)

Starling
Swallow
Swift
Teal
Song thrush
Mistle thrush
Blue tit
Coal tit
Great tit
Long-tailed tit
Treecreeper
Grey wagtail
Pied wagtail
Willow warbler
Wood warbler
Great spotted woodpecker
Wren
Mute swan

Footnote.

A few of the trees and shrubs which have been listed here are on private land but can be seen without difficulty from public places.

Six of the listed birds have been occasional or accidental visitors to this area and there is no guarrantee that they will be seen here again. They are the dipper, Canada goose, pochard, common sandpiper, snipe and mute swan. All the other species may be seen all the year round in the case of residents, or at the appropriate time of year in the case of migrants.

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