

GUIDE TO CHIGNAL PARISH WILDLIFE



RESULTS of 2020 SURVEY

Publication sponsored by Chignal Parish Council

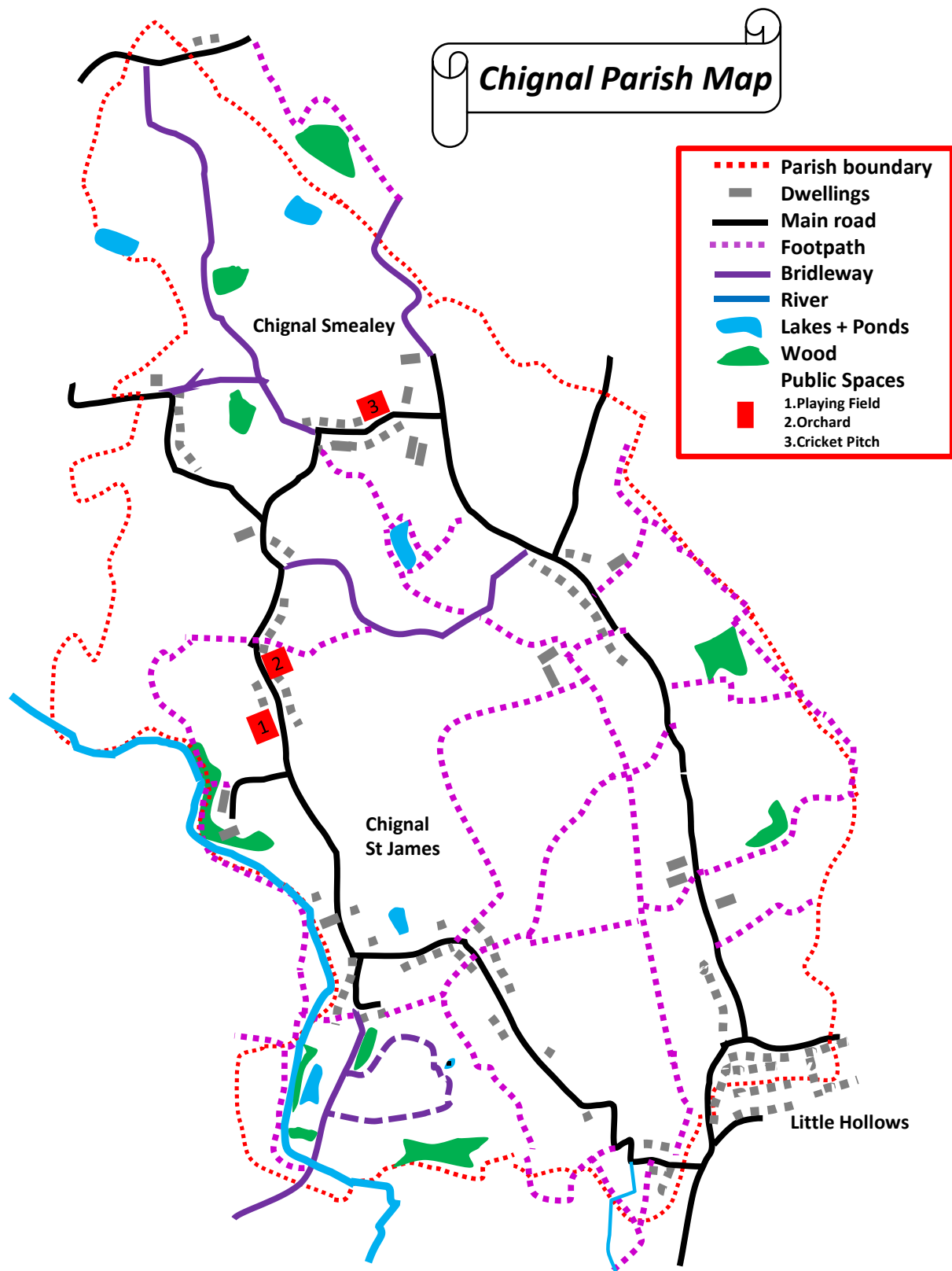


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Introduction

The survey was performed by placing trail cameras in specific habitats in the parish for a week at a time to capture photographs or videos of passing animals. The images were viewed to identify the animals and record the results by species, number of animals in the picture and whether it was daylight or night-time. We used three cameras at a time to cover an area of about 100 square yards. The cameras were placed in a variety of different habitats and the survey details the results from: ponds and lakes, riverside, open fields, public spaces (the village playing field and cricket pitch), hedgerows and woodlands. The results for each habitat were also divided into the seasons: spring (March to May), summer (June to August), autumn (September to November) and winter (December to February). We have not identified the individual habitat sites within the parish to protect the animals from poaching and the areas from excessive human traffic. You may see these animals while walking on the footpaths or bridleways as the cameras were placed close to these paths, there is no need to leave these paths.

We would like to thank all those people who helped the project. The Chignal Parish council for funding the cameras and other equipment required for the survey (now to be used to monitor fly-tipping). All the kind landowners and garden owners with birdfeeders who helped us monitor the animals and birds.

We hope you will enjoy the report and trail camera photographs, and that it will stimulate conservation and protection of the animals within the parish. Hopefully, this survey can be repeated in 5 -10 years' time to see how things have changed. The study covered the whole area of the parish during the period of February 2020 to March 2021.

William Leadbeatter, Simon Leadbeatter and Jon Lewis

Rabbit (*Oryctolagus cuniculus*)

One of our most numerous wild animals, found in all parts of Britain except in the islands of Scilly and Rhum. Rabbits are not native to Britain, as they were introduced from Spain in the twelfth century as a source of food and fur.

British rabbits are greyish brown in colour, have large ears and hind legs. Their chest is brown, the underbelly is lighter in colour and the underside of the tail white. This can be a characteristic of a rabbit as they raise their short tail vertically when running. Rabbits can easily be confused with hares, especially at a distance, but hares are larger, much faster, have bigger hind legs, black tips to their ears and no white 'flag' tail. The male rabbit - buck - is slightly larger than the female - doe - and can weigh between 1.5 to 1.7kg.



Rabbits live in burrows, which are deep tunnels often found in the sides of earth banks or can be found close to the edges of fields. The burrow entrance is generally about a foot round, often with a mound of dug earth in front of the hole. Rabbits in the parish tend to live as pairs in burrows with one or two entrances, but elsewhere rabbits can live in larger multiple family groups in warrens with many entrances and exits.

The gestation period for rabbits is short for a mammal of about 30 days, the young are born naked, deaf, and blind in the burrow. They remain in the burrow for about 18 to 20 days before venturing out. Rabbits can have litters of between 2 and 7 young called kittens at a time and have several litters during their breeding period between January and August. This is why we see so many rabbits around the parish.

Rabbits eat a variety of grasses and herbage especially the shorter grass varieties including winter wheat in cultivated fields. Grasses and some plant types are hard to digest, as the gut bacteria only partially breakdown the grass, so rabbits will eat their fresh faeces to get extra nutrients; this process is called caecotrophy. The animals eat close to their burrows because they are wary of predators, so whilst their habitat area is open fields they remain close to their burrows or hedgerows for protection. The main feeding times are in daytime especially dawn and dusk, but they will venture out at night.

RABBITS IN OPEN FIELDS

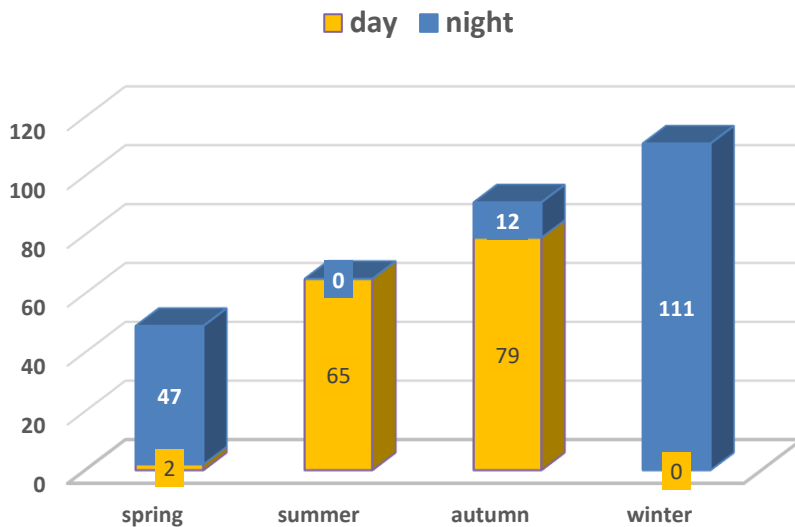


Chart shows numbers of rabbits seen during the day (yellow) or night (blue) during the different seasons. The smaller highlighted numbers 2,0,0, refer to the numbers seen during the day or night. NB note the big difference between spring and winter compared to summer and autumn.

According to our data rabbits come out at night mainly in spring and winter but will be out during the day in summer and autumn. The 'open field' habitat was in grass meadows with hedgerow or cover reasonably close by. The habitat described as 'public spaces' is the village playing fields and cricket pitch, which is grassland, so similar to open spaces. Hedgerows and woodland are the other main sites that we see rabbits. Our survey results show very few rabbits visit the ponds and lakes during the day and no visits to riverbanks.

HABITAT	SPRING		SUMMER		AUTUMN		WINTER	
OPEN FIELDS	2	47	65	0	79	12	0	111
HEDGEROWS	18	25	12	5	6	0	5	3
WOODLAND	8	0	14	3	12	20	28	10
PUBLIC SPACES	5	14	18	2	4	18	0	1
PONDS + LAKES	0	0	0	21	0	15	1	0
RIVERSIDE	0	0	0	0	0	0	0	0
TOTAL	33	86	109	31	101	65	34	125
	DAY				NIGHT			

NB the numbers of animals refers to the total seen over 7 days in front of all three cameras. Public spaces refer to the village sports field or cricket pitch.

Predation of adult rabbits by foxes, buzzards, and mustelids (stoats, weasels, and polecats) can limit numbers. Young rabbits can also be predated by badgers who dig them out of their nursery burrows. In the wild rabbits rarely live over a year and about half the animals die before they are 3 months old. The biggest killer of rabbits is the virus that causes myxomatosis. This disease causes inflammation of the eyes and excessive nasal discharge. Eventually the animals die from pleuritic lungs. The European rabbit is very prone to the virus that causes myxomatosis and in certain years it can dramatically reduce the population throughout Britain.

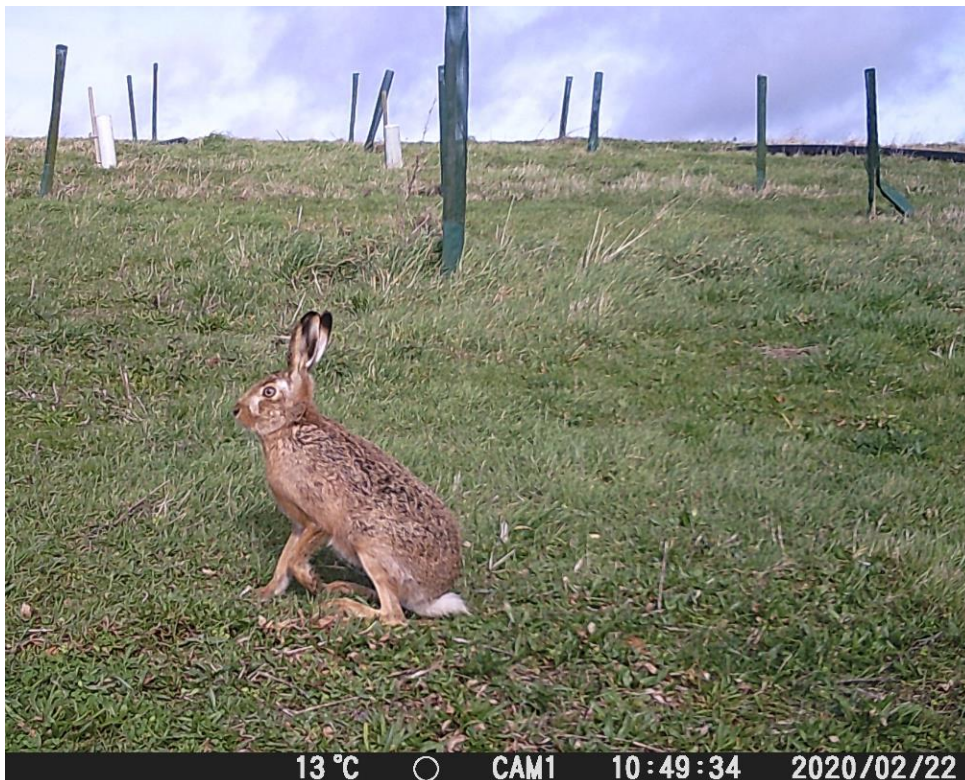
During the survey we also placed the cameras directly in front of burrows and found some interesting actions: in February, rabbits leave the burrow mainly at night and just before dawn and then late afternoon and into dusk, they remain in the burrow from 9AM to 3PM and 1AM to 5AM. We also have pictures and videos of rabbit burrows being visited by badgers (who dig into the burrow), foxes and a polecat or mink.



Rabbits will eat in groups for safety, while one animal will keep watch for predators. Note the rabbit has a white 'flag' tail which is the easiest way of distinguishing between rabbits and hares.

Hares (*Lepus europeaus*)

There are two different hare species in Britain: brown and mountain. Our local hare is the Brown Hare (*Lepus europeaus*) which was introduced into Britain from Europe in the Roman Times. Brown hares are much bigger than rabbits and weigh twice as much; a female hare can weigh up to 3.7 kg. Besides weight and size, the distinguishing features of a hare versus rabbit are that the hare has amber eyes, large black tipped ears (held upright when alarmed), large hind legs, dark black edged tail and runs at high speed. Hares are extremely fast and have been clocked running at 45mph for short spurts but can run at 35mph for long distances.



Hares are animals of the open countryside. They do not have burrows but nest in depressions of flattened grass called a form. They generally lie up during the day and graze at night. Young - leverets - are born in the forms with their eyes open and fully furred. For the first month they are only visited once a

day by their mother to be fed as this protects them from predators at their most vulnerable age before they learn to run.

Hares tend to be solitary animals and are rarely seen together except during the mating season. March is the famous month for hares as they are more likely to be seen chasing one another over fields. They can also be seen 'boxing'; that is a pair of hares standing up opposite one another and using their front paws to box/fight their opposite number. The boxing pair may be all female (Jill) or all male (Jack) or male and female. The chasing and boxing episodes during their mating season has given rise to the 'Mad as a March Hare' phrase. Breeding can occur from February to August and a Jill may have up to 4 litters a year with 2 to 4 leverets in each brood. Gestation period is 40 to 42 days.

Hares eat grasses and other herbage, in winter, if food is short, they will eat the inner part of branches but not the bark. Hares may eat fresh faeces to gain the extra nutrients, but it is not as common a practice as seen in rabbits. The hare faeces are longer and flatter than a rabbit's faeces and can be found on mounds of earth as a marker of territory.



Predation of hares is by foxes or large birds of prey such as buzzards. Speed is the greatest protection for hares from predators, but they prefer to graze close to areas of long grass in which to hide. Hares can live up to an age of 3 to 4 years.

The number of hares in Britain has decreased over the years since 1900s as modern agriculture has changed the type of crops but has increased recently with set-a-side. Hares are not susceptible to myxomatosis.



Our survey results show that hares are much less common than rabbits and are mainly found in open spaces, close to hedgerows and in woodlands during the autumn and winter months. They are mainly seen in the daylight hours; the exception was in woodland during the winter.

HABITAT	SPRING		SUMMER		AUTUMN		WINTER	
OPEN FIELDS	4	1	1	1	0	0	5	0
HEDGEROWS	5	1	1	0	0	0	5	0
WOODLAND	0	0	0	0	3	0	1	3
RIVERBANK	5	0	0	0	0	0	5	0
PUBLIC SPACES	0	0	0	0	0	0	0	0
PONDS + LAKES	0	0	5	0	0	0	0	0
TOTAL	14	2	7	1	3	0	16	3

DAY

NIGHT



Fox (*Vulpes vulpes*)

The fox is widespread throughout Britain except for islands in Scotland (except Skye). There are many subspecies of fox worldwide, the British fox is known as the red fox and is also found in North America, Europe, and Russia, and has been introduced into Australia.



The fox is a reddish/orange in colour with a white throat, chest, and belly. The large bushy tail is mainly the same colour as its body but with a white tip. The lower legs are darker brown even black. The male fox - dog - weighs about 6 to 7kg and the

female - vixen - 5 to 6kg. Foxes are the same size as medium size dogs but not as heavy. They are very agile and have been known to jump over 6-foot fences.

Foxes are very adaptable to different environments and probably more foxes are found in urban areas per acre than in the countryside. Foxes are omnivorous and will eat a variety of foods from earthworms, small mammals and birds, beetles, fruit and in urban areas raid dustbins or fed by householders. The distance that foxes cover during their hunting trips is probably greater in the countryside than the in

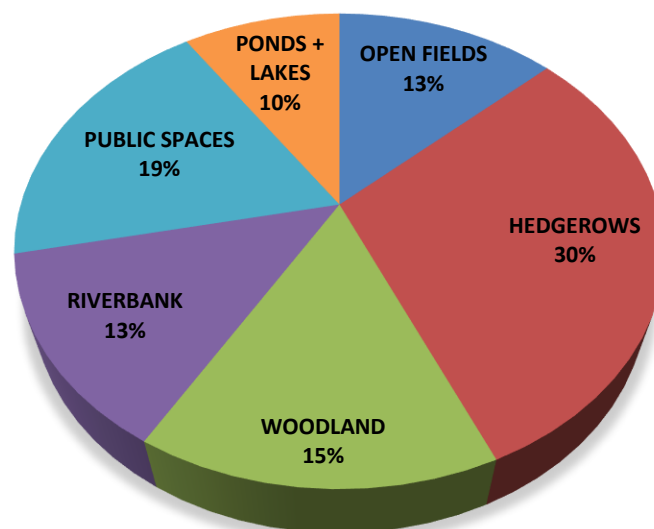


urban areas, there are reports that the urban fox has a smaller skull and brain than its country cousin so urban life may have a long-term effect on fox development.

Foxes tend to live as pairs as a dog and vixen plus any young – cubs or kits. The mating season is in January and this is when you often hear the loud barks from the dog fox or shrill cry of the vixen. Young are born in Spring after a 49-to-54-day gestation period. Litters average four to five cubs which are born blind and deaf in a den (called an earth). The earth may be dug by the foxes, or they may enlarge a rabbit burrow or use holes made by other animals. In urban areas, cubs are often born under garden sheds. A vixen stays in the earth with her cubs for the first two weeks of their lives. At about four weeks old, in late April or early May, cubs begin to come into the open.

Foxes tend to hunt at dawn or dusk and are generally solitary hunters. Foxes use their eyesight and hearing to identify prey. They do not have a pronounced sense of smell seen in some varieties of dog. Their hunting areas are wide-ranging, and this is reflected in our survey results with foxes seen in all the habitats studied. There were more foxes seen close to hedgerows and this may relate to the presence of rabbits or to the fox hunting territory. Night-time seems to be the busiest time for fox movement but there was an equal number of sightings for each season. Interestingly, in all the photos and videos where we saw a fox they were always moving through the area and never stopped.

Fox Territories



Graph shows that foxes move throughout all the habitats. The data is for both day and night, although foxes are about 4 times more active at night.

HABITAT	SPRING		SUMMER		AUTUMN		WINTER	
OPEN FIELDS	0	0	1	1	0	3	0	2
HEDGEROWS	1	5	2	2	0	6	0	0
WOODLAND	2	0	0	0	2	1	1	2
RIVERBANK	0	3	0	0	0	0	0	4
PUBLIC SPACES	0	1	1	4	0	1	0	3
PONDS + LAKES	1	0	0	3	0	0	1	0
TOTAL	4	9	4	10	2	11	2	11

DAY

NIGHT



Foxes have no natural predators and can live for up to 9 years, but generally only survive to 3 or 4 years of age. There are no special diseases associated with foxes, they can suffer from many of the canine diseases such as mange.

Fox at night-time. The mammalian eye reflects the light of the flash and gives the animals a rather sinister appearance.



Badger (Meles meles)

This distinctive animal is widely found in UK and in Europe and is also known as the European or Eurasian Badger. The badger has a black and white striped head and grey body, the animal has a powerful build with short legs and a stocky body. Male badgers - boar - can weigh from 12 to 17 kg depending on the time of year as the animals gain weight to help survive winter.

Badgers live communally in setts, a series of tunnels often deep underground normally in woodland or the edge of woods. Setts can have numerous entrances and exits each about 18 to 24 inches wide, so much wider than a rabbit hole. There is often a big spread of dug earth in front of the entrances. Setts can be decades old if the area has not been disturbed. The setts can house groups of up to 15 badgers, called a clan, in different chambers within the tunnels. Badgers are very tidy animals and clean out their bedding from inside their burrows as often as once per week. Video obtained during the survey shows a badger bringing back a large ball of grass, bracken, leaves etc., as bedding, to do this, badgers must walk backwards pulling the bedding ball between their front feet.



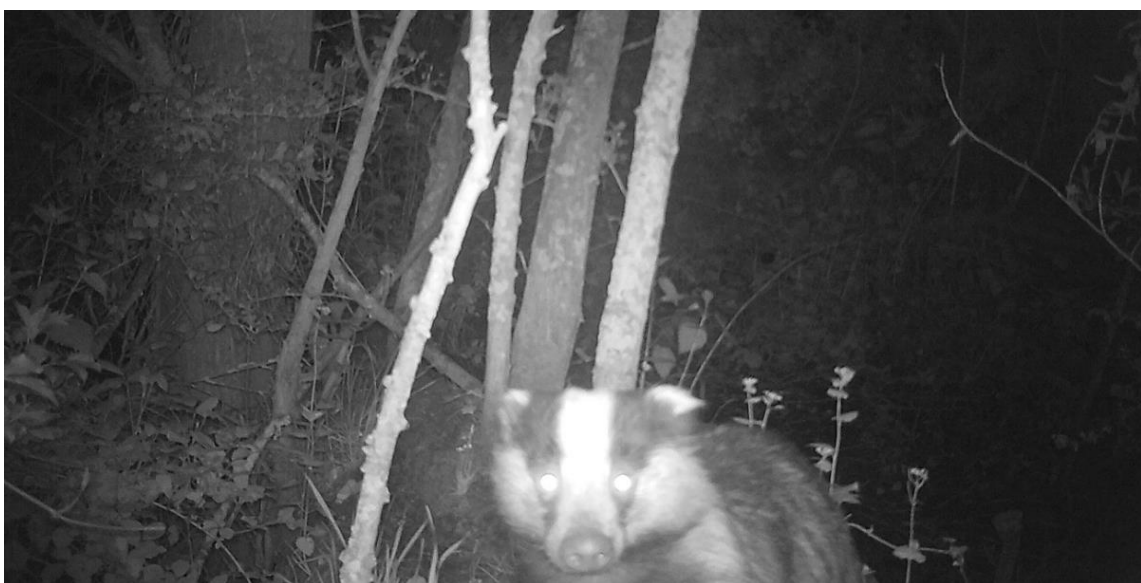
Badgers are defined as carnivores as they are a member of the mustelids family (stoats, weasels and polecats). Their main diet is earthworms and can be up to 80% of their diet, they will also eat small mammals (mice, rats, small rabbits), carrion, large insects but they also eat fruit, tubers and cereals. Badgers will also eat hedgehogs and are their main predator. Badgers are nocturnal and hunt over a wide territory using mainly smell and hearing to detect prey. Their search for earthworms can be clearly seen in dug up roadside verges or even in gardens. The other sign of badgers in the environment is the presence of latrines. They defecate into small holes dug into earth and these are also markers of their territory. They tend to use the same tracks when moving around, so look for trodden paths and if the tracks pass through wire netted fencing look for thick black or grey hairs stuck to the wire.



Badgers are monogamous and mate at any time in the year, but the fertilised egg is only implanted into the sow's uterus in December. Cubs are born 49 to 51 days later in January or February. The sow may have between one to five cubs; they are born blind, pink with greyish hair, the darker strips and grey fur appearing after 4 to

5 weeks while their eyes open. They remain in the breeding chamber until at least eight weeks when they may be seen outside the sett.

Badgers can live for up to 15 years in the wild but large numbers are killed by cars every year. In Britain, they have no natural predators and have even been known to live with foxes in the same sett. They can suffer from bovine tuberculosis. This cross transmission has led to culling or vaccination of badgers in specific areas to try and limit the infection in cattle. It is still debatable how effective this method is in controlling TB in cattle, unfortunately cattle are not vaccinated against TB because it is not currently possible to distinguish between a vaccinated and TB infected cow.



The survey results show that we did not capture any photos or videos of badgers during the daylight hours. The data shows most animals were seen in woodland. The actual numbers are possibly biased as we placed one camera close to the setts, so the animals are captured as they leave/enter the sett.

HABITAT	SPRING		SUMMER		AUTUMN		WINTER	
OPEN FIELDS	0	1	0	3	0	3	0	1
HEDGEROWS	0	1	0	10	0	2	0	4
WOODLAND	0	17	0	17	0	18	0	24
RIVERBANK	0	3	0	0	0	0	0	4
PUBLIC SPACES	0	2	0	3	0	0	0	0
PONDS + LAKES	0	0	0	0	0	1	0	1
TOTAL	0	24	0	33	0	24	0	34

DAY

NIGHT



Muntjac (*Muntiacus reevesi*)

These deer were introduced into Britain in early 1900s from China. There are several different varieties of muntjac in Asia, but the one that is widespread in South East England is the Reeves muntjac. This deer is ginger brown in colour with dark strips on its face. They have a short tail with a white underside which is raised as a flag when escaping from danger. Male deer - buck - have a pair of slightly curved horns that point backwards from its skull. They can weight up to 18kg and about the size of medium sized dog with a robust build. Female Muntjac - doe - do not have horns and are slightly smaller than the males and weigh up to 16kg. Horns are not permanent in deer, they fall off (cast) in April-June, they start growing out covered in fur (called velvet) from May-August and become clean of fur in September-April.



Female Muntjac.
Showing black strip
from crown to nose,
also an olfactory
gland/strip just in front
of the eye.

Male Muntjac.
Showing black strip
from crown to nose,
also an olfactory
gland/strip just in
front of its eye. Horns
slope backwards with
curved ends.



Female muntjac and older fawn.



They are usually seen as solitary animals except the doe which will stay with its young fawn. Muntjac do not have a specific mating season and can produce young at any time of the year. Gestation period for muntjac is 7 months. Does have a single fawn at a time. Muntjac can live up to 16 years but generally have a shorter lifespan. The adults do not have any predators, but foxes can attack young muntjac.



Young muntjac fawn

Muntjac are mainly active at dusk and dawn but can be seen at any time of day. They are normally seen in woodland as they like to eat shoots from shrubs and brambles. Muntjac in gardens can browse on many different plants. Muntjacs are also known as barking deer and they are often responsible for loud barks heard during the night and occasionally during the day

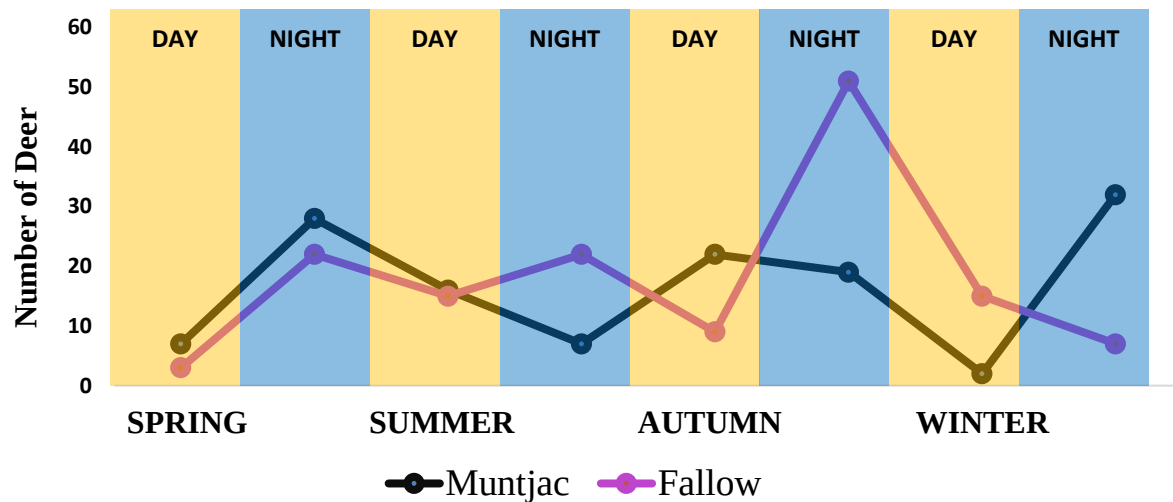
Our survey showed they are more active at night in the winter and spring. They roam widely through the different habitats but in general like to stay near woods, trees and cover.

HABITAT	SPRING		SUMMER		AUTUMN		WINTER	
OPEN FIELDS	0	11	4	0	0	0	0	0
HEDGEROWS	2	2	11	6	1	6	0	4
WOODLAND	3	5	0	0	5	8	1	3
RIVERBANK	1	8	1	1	12	1	1	18
PUBLIC SPACES	0	1	0	0	4	4	0	3
PONDS + LAKES	1	1	0	0	0	0	0	4
TOTAL	7	28	16	7	22	19	2	32

DAY

NIGHT

Muntjac and Fallow Deer Comparison



There are similar numbers of muntjac and fallow deer seen in the parish in all the different habitats. More fallow deer are more active at night in the Autumn when it is their mating season.

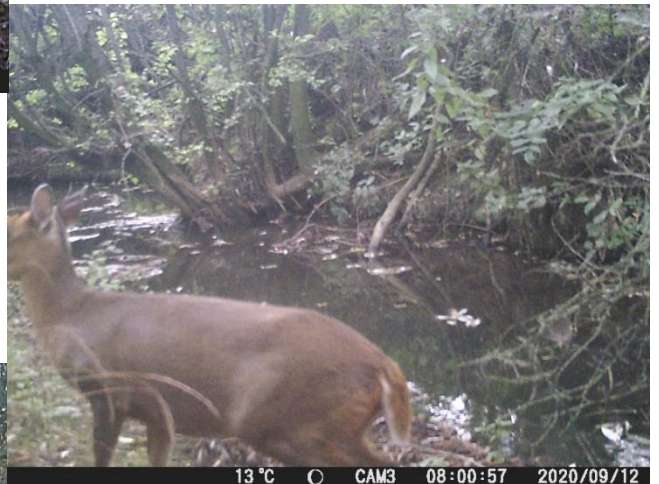
Fallow Deer (*Dama dama*)

The largest wild animal in the parish, with females and males weighing 60 to 100 kg respectively. The name fallow is from its colour of a light brown but there are four different colours possible and some of these have been seen in the parish. Typical colour is tan with white spots and a black bordered tail, known as Common; lighter brown with white spots and a brown tail - Menil; black or dark chocolate brown but no spots – Melanistic; and creamy white – Leucitic, not albino but a true white coat. Coat colours can be slightly darker with less clear spots in winter, but the black and white varieties retain similar coat in winter and summer.



Common fallow deer, tan colour coat with white spots on side and rump. Note the black stripe on tail.

Menil fallow deer with tan coat and brown tail.



Melanistic, black or dark chocolate coloured coat

We did not photograph a leucitic (white) fallow deer, although exceptionally light fallow deer have occasionally been seen in the parish.



Fallow deer are normally very easily disturbed and are often seen running away. The distinctive marker between fallow deer and muntjac is fallow deer have the black inverted U-shaped markings on its rump with a longer black tail. The picture is of a common fallow deer, although it has a very dark coat.

Fallow deer were originally introduced into Britain in Roman times and then reintroduced after the Norman invasion for hunting purposes. Fallow deer are animals of the woodland where they eat grasses, shoots from bushes and trees. They will also eat tree bark and so can come into conflict with foresters and farmers as the trees can be killed if the bark is stripped. Deer are ruminants and when not eating may lie down under cover, regurgitate their food to chew the cud.



The antlers in male fallow deer - buck - grow and fall off during the year but their shape changes with age and maturity. Young fallow males have rounded branched antlers up to the age of three, older deer have palmate (flat, hand-like) antlers which increase in size with age. Antlers are cast (fall off) in April/May and the new antlers start to grow in May/August with a fur covering known as velvet. The velvet is rubbed off in August/September and then the full-sized antlers are kept during the mating season.

The mating season or rut is an important time for fallow deer, and it has a profound effect on their behaviour. During most of the year, male and female deer form small herds of the same sex to graze and move around together. These group dynamics change during the mating season where a dominant male may have a harem of females - does. Male fallow deer will form stands which are small areas cleared of grass to leave a muddy scrape. Males will call to females and the sound described as a groan or belch that is often heard in the early evening. Males will challenge other males by parallel line walking, or if no one backs down, they fight by clashing antlers and trying to force one

another backwards until one concedes. Once the doe is mated, the gestation time is 245 days before a single fawn is born in May or early June. The doe nurses the fawn for up to 16 weeks and they will remain together in the herd up to 12 months. Fallow deer generally live for 6 to 8 years. They have no predators in Britain and no specific deadly disease is noted for fallow deer in the UK.

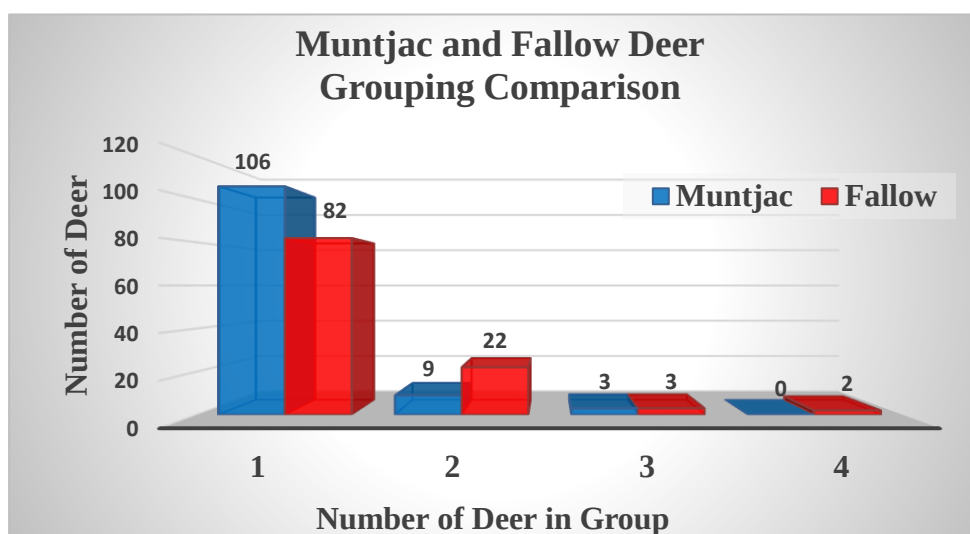
Our survey results show the fallow deer seemed to like the riverbanks. All the riverbank areas surveyed were heavily wooded with small trees such as blackthorn, hazel, elder. This possibly gives the deer more cover than the woodland which consists of mainly larger mature trees set further apart. Otherwise, the animals appear to roam where they like but prefer to do this more at night than in daylight. The open fields and public spaces are mainly visited at night.

HABITAT	SPRING		SUMMER		AUTUMN		WINTER	
OPEN FIELDS	0	6	0	0	0	7	0	2
HEDGEROWS	0	0	2	1	0	6	0	0
WOODLAND	2	1	0	3	0	6	0	2
RIVERBANK	0	7	11	16	9	12	7	1
PUBLIC SPACES	0	6	2	2	0	18	8	2
PONDS + LAKES	1	8	0	0	0	2	0	0
TOTAL	3	22	15	22	9	51	15	7

DAY

NIGHT

We also looked at what groupings the muntjac and fallow deer prefer. Muntjac are more solitary, fallow can be seen as solitary, in pairs or small groups.



Grey Squirrel (*Sciurus carolinensis*)

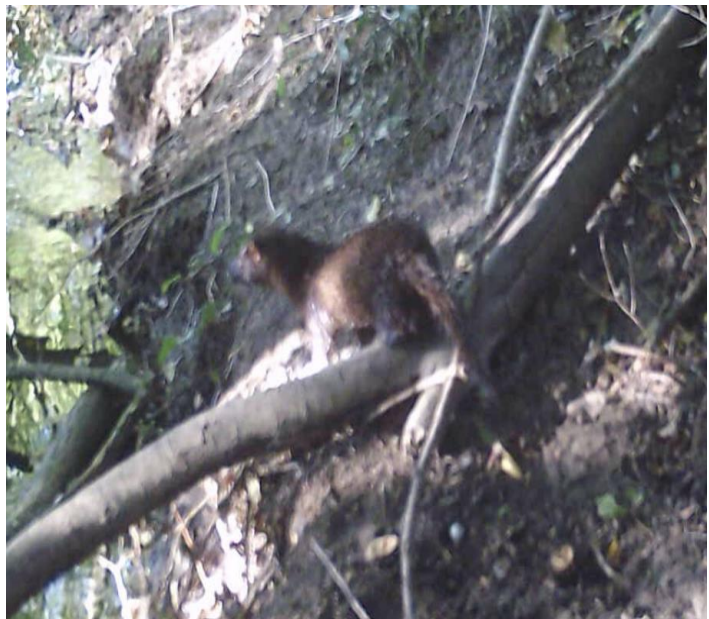


Grey squirrels are common within the parish and are found in all the habitats studied. They were only seen during the daylight hours and never at night. These animals were introduced into Britain from North America in 19th century and have decimated the native red squirrel population because they carry squirrel pox which is lethal to red squirrels but does not affect greys. Greys live in a drey (a collection of twigs), have a mating seasons in spring and summer and may result in the female producing two litters a year of 3 to 4 young. Squirrels eat

nuts, acorns, fruit and bark. They will bury nuts and acorns for winter when they become less active but do not hibernate.

Mink (*Neovison vison*)

Brought into UK from America for fur farming in the 1920s. The animals seen in the countryside have bred from escaped or released mink and are now regarded as a pest. They are small chocolate brown or black in colour and slightly bigger than stoats. They are semi-aquatic and eat fish, birds and small mammals including water voles. Mink is considered a pest because it is believed their predation of water voles is leading to extinction of these animals in the UK, as numbers of voles has fallen by more than 95% since the 1970s about the same time the mink numbers started increasing. We only captured images of one mink on the riverside throughout the year so probably not widespread.



Polecat (*Mustela putorius*)



These are native animals, and the 'domesticated polecat' is the ferret. They are larger than other mustelids such as the weasel, stoat, mink but smaller than the badger. We only captured a grainy picture of one animal in a rabbit burrow. We are still not sure than it was a polecat but seemed larger than mink when using a photo of a rabbit at the same site for a comparison. They do have conspicuous white bandit-like markings around the face and a dark brown topcoat over a lighter underfur body. As the

photo was taken at night, it is difficult to pick out this coat pattern, so it is not a confirmed sighting of a polecat.

Otter (*Lutra lutra*)

A large brown mustelid weighing up to 4 kg., semi-aquatic and very muscular. We only captured one image of an otter on the riverbank late at night. We do not believe otters live in the parish but instead may be commuting through to get to larger rivers. Otters eat fish, birds, amphibians and crustaceans and the size of our rivers would not be sufficient to keep the animals fed. What it does show is how clean the rivers are now. Otters were an endangered species in the 1970s possibly because of habitat loss and run-off from fields altering the water quality.



Videos of Interest



Deer Attractant



Boys get together



Squirrel Agility



Rabbit Hole Visitors



Badgers Collecting Bedding



Badger Grooming

Apart from setting the cameras to take single photographs to count the animals, we have occasionally used the camera video setting to captured footage of the animals. One advantage of using video is the ability to see these different behaviours in action. These videos can be seen on Chignal Parish website.

Wild Birds

The trail cameras placed in the habitats did not photograph small birds, they did photograph larger birds with pheasants, wood pigeons and magpies being caught on camera on several occasions. To survey the parish bird population, we placed a camera in front of feeders in different gardens. The results are shown for the different species as a proportion of the total of the number of birds photographed. The technique used was to record the species of bird and time of visit during the day. We left the camera in place for 1 to 3 days to try and capture at least 100 images to give a reasonable analysis of visiting birds. The gardens studied were in the St James area and all had gardens backing onto open fields. Most gardens had the feeders close to shrubs or bushes which helped protect the birds from visiting predators such as the sparrowhawk, which was occasionally seen in the area. Hanging feeders in the different gardens were generally of similar size but contents varied from mixed seeds, peanuts, fat balls or Niger seeds. Some households had more than one feeder normally with two or more varieties of feeds. To maintain privacy we have simply labelled the different houses as A to F.

There is a surprising variation between the species of birds visiting the different gardens. In summer, the numbers of a specific species are related to which birds are nesting nearby and feeding their young. In winter, the variety of feeding birds was vastly different from the summer visitors. It is difficult to draw any firm conclusions as to why there is such a large variation in the species of birds visiting different gardens. We will try to repeat the garden bird survey with an increased the number of gardens taking part in the study.

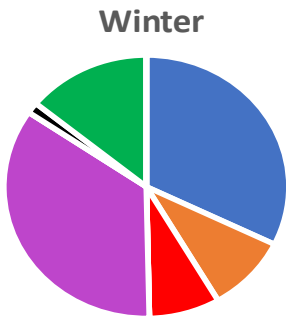
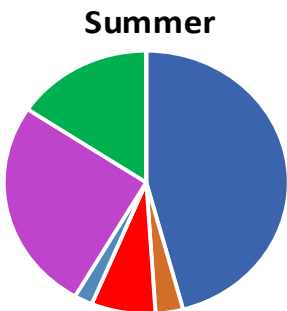
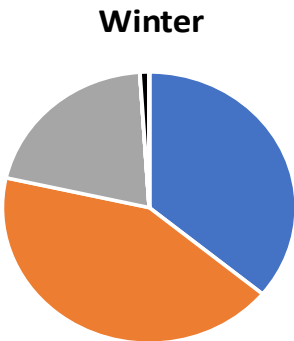
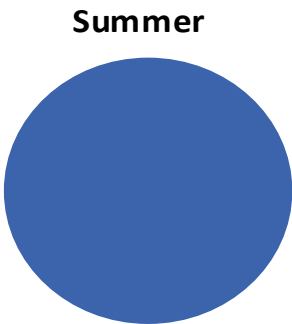
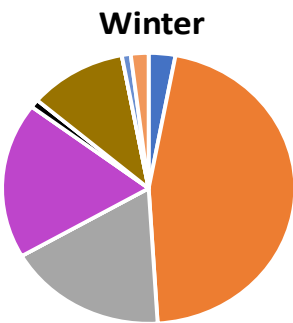
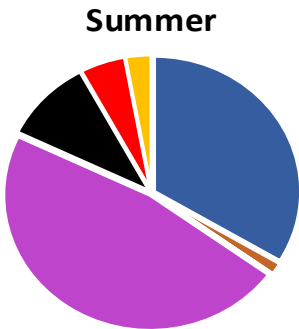
We did not put any feeders out in different survey habitats to determine what birds frequented the areas, because the feeders would need to be in place for at least a month and that would alter the feeding habits of the birds. Lists of which birds have been seen in the parish in 2020 is shown below.

Small birds: wren, firecrest, blue tit, great tit, marsh tit, long tailed tit, chaffinch, goldfinch, greenfinch, bullfinch, reed warbler, chiffchaff, robin, house sparrow, hedge sparrow, yellowhammer, linnet, reed bunting.

Medium sized birds: grey wagtail, yellow wagtail, pied wagtail, blackbird, song thrush, mistle thrush, fieldfare, redwing, skylark, starling, swallow, swift, kingfisher, jay, little owl, green woodpecker, greater spotted woodpecker, jackdaw, collared dove, wood pigeon, magpie.

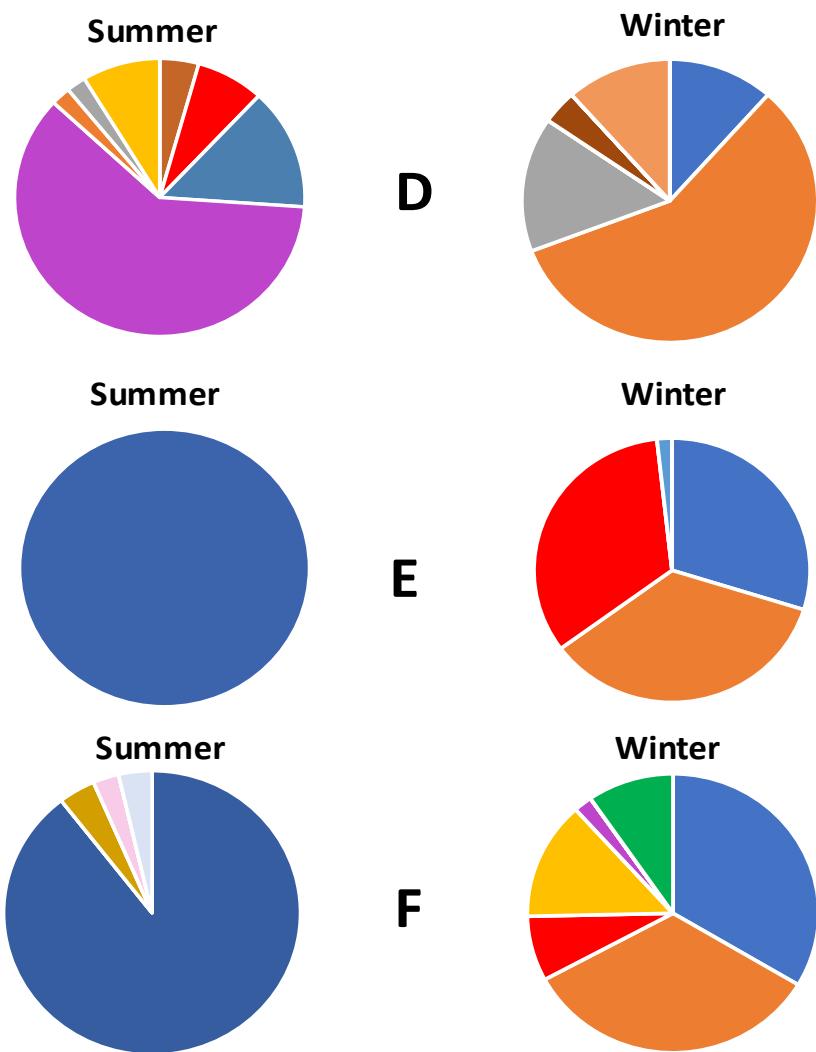
Larger birds: quail, red-legged partridge, cuckoo, lapwing, pheasant, kestrel, sparrowhawk, carrion crow, barn owl, tawny owl, cormorant, mallards, coot, moorhen, great crested grebe, rook, buzzard, red kite, little egret, Canada geese, Greylag geese, mute swan.

Garden Bird Survey



- | | | |
|-------------------|------------------|--------------|
| ■ SPARROW | ■ BLUE TIT | ■ GREAT TIT |
| ■ WOOD PIGEON | ■ CHAFFINCH | ■ GOLDFINCH |
| ■ COLLARED DOVE | ■ G.S.WOODPECKER | ■ GREENFINCH |
| ■ COAL TIT | ■ JAY | ■ MAGPIE |
| ■ LONG TAILED TIT | ■ BLACKBIRD | ■ STARLING |
| ■ ROBIN | | |

Garden Bird Survey



- SPARROW

WOOD PIGEON

COLLARED DOVE

COAL TIT

LONG TAILED TIT

ROBIN
- BLUE TIT

CHAFFINCH

G.S.WOODPECKER

JAY

BLACKBIRD
- GREAT TIT

GOLDFINCH

GREENFINCH

MAGPIE

STARLING

Trail Cameras and their Setup

There are now numerous manufacturers of trail cameras with prices ranging from £40 to over £300. The cameras we used (Victure HC300) for the survey cost in the lower end of the price range but still took clear pictures and had multiple functions. The cameras were fixed to posts or trees using straps with the camera lens pointing towards the survey area. The area would normally be an obvious animal path or possible site for animals to stop. We avoided placing the cameras directly in front of tree branches or plants as in a wind as movement of these would falsely trigger the camera shutter.



Picture shows the camera set up to monitor a wildlife path through trees. The camera's field of view covers the area between trees, as shown by the red brackets.

The camera shutter is triggered by activation of a motion sensor. The motion sensor has a wider field of view than the camera, so activating the motion sensor then triggers the camera after a delay. The time for the delay can be altered in the set-up program. Other programmable functions include photo or video, time delay, photo or video image size. Length of video capture can be programmed as well as time delay between filming. Data such as date, time of photograph, temperature can be recorded on the photo or video .



The trail camera also has an infra-red flash system which is triggered at night for photo or video. The wavelength used for the flash does not disturb the animals nor is it visible to the human eye. All night-time photos and video are in black and white. Power supply to the camera is via eight AA batteries which normally last 3 to 5 months unless video is used continuously.

The system used to conduct the survey was to place the three cameras in the chosen habitat so that they covered different areas. The cameras were programmed and left to run for 7 to 10 days. The resulting photos or videos were stored on an SD card (32GB) inserted into camera. The photos or video on the SD card were reviewed and the number and type of animals seen was recorded. We also recorded whether it was day or night but not the exact time. A back-up of all photos and videos was then placed onto a memory stick.

The field of view of the motion sensor is wider than field of view of the camera lens thus many of the photos and videos did not have any animals in view. A camera could capture between 1 and 300 images in a week with the average being 25 to 40 images, of which 50% would show animals. We set the photo program to 20MB image per single shot with a 30 second delay between shots. We occasionally captured the same animal 30 seconds later, but we would only count the animal once. Videos worked very well; the setting was for 30 seconds run followed by a 30 second delay. We did get 50% blanks and most animals only 'appeared' for about 10 to 15 seconds. The advantage of video was being able to see interesting behavioural patterns such as badgers collecting bedding, or a male fallow deer rubbing himself with urine as an attractant during the rutting season. The main disadvantage being battery drain.



Occasionally the animal gets too close to the camera!

Summary

The aim of the survey was to identify which animals inhabited the parish and the types of habitat they frequented. Three trail cameras monitored an area and recorded animal movement in that area for a week. We then moved the cameras to another area and repeated the process. In all, we did 60 weeks of surveying between Feb 2020 and March 2021. In the survey report we have selected data from six different habitats and compared the seasonal variation in animal movement. Some habitats that are not shown in the report were not frequently visited by animals e.g., the orchard, churchyard and large gardens. The wire fencing surrounding the orchard prevented entry to most animals except squirrels and a fox; the churchyard had mainly cats visiting.

The most abundant animals in the parish are rabbits. Their main habitat is open fields or close to hedgerows. They are seen more at dawn and dusk but will come out to eat grasses and herbage at night. Rabbits are rarely seen near ponds or rivers so must get their required water from their food. Hares are open space animals as they use speed to escape predators as well as using cover. They are not as common as rabbits, but that the parish has hares, this should be seen as a success for maintaining a suitable environment for them to prosper.

Foxes can live in many habitats, even urban, because of their adaptability and omnivorous eating habit. We found foxes in all the habitats and, compared to the other mammals studied, always seem to be 'on the move'. They can be seen during daylight but are four times more active at night. Badgers are nocturnal; no badger was captured out in daylight although they leave their woodland setts soon after night has fallen. Video recording showed the unexpected behaviour of badgers collecting bedding as large balls of grass and then by walking backwards, dragging the balls back into the sett.

Deer are the largest animals in the parish and are a quite common sight. The smaller muntjac are found in all the habitats but prefer the cover of trees, hedgerows or riverbanks, as the latter often has dense cover of small trees. Fallow deer are seen in equal numbers as muntjac, and within the parish we have recorded three different types of fallow deer coat colourations. Fallow deer are highly active during the Autumn mating season and we have interesting video of male deer behaviour during this season.

Also recorded were numerous squirrels in different habitats but only during daylight. We recorded one mink by the riverbank, possibly a polecat visiting a rabbit burrow and an otter on the riverbank. The presence of an otter, even though probably just travelling through to larger rivers, suggests the river water is very clean. We did not find any hedgehogs, water voles, weasels, stoats, snakes or lizards. It could be that we did not optimise the position of the cameras in the correct habitat to photograph these animals or they are absent from the parish. We have occasionally seen weasels and stoats in the past so they should still be in the parish. Snakes and lizards, because they are cold-blooded, may not have tripped the cameras.

The cameras did not photograph small birds, so we were unable to monitor birds in most of the parish habitats; but we did monitor birds visiting garden feeders in six different houses. There is a surprising difference of bird species between gardens, especially as all the houses seem to have similar garden environment. We will have to do further surveys with more gardens involved to try and understand the dynamics.

Overall, there are many different animals in the parish which are thriving because of the diverse habitats available to them. The parish land is mainly arable fields of crops or grassland but connecting these fields are hedgerows and drainage ditches. Some of these hedgerows have oak trees that are over 200 years old, and maps from early 1900s show similar field structures as seen today. The success of the animal wildlife is helped by the landowners and farmers who have maintained the hedgerows, woods, ponds and left odd corners of fields as uncultivated scrub. All these hedgerows and drainage ditches provide the necessary cover and corridors between all the areas within the parish. Hopefully they will remain part of the parish for the future, as they are a defining feature and so important for all the wildlife.

The survey would not have been possible without the financial support of the Chignal Parish Council to buy the cameras and necessary equipment and the support of the landowners who allowed us to place the cameras on their land. We have deliberately not specified the exact locations of the cameras to protect the animals from poachers and the sites from excessive human traffic. All the locations were close to parish footpaths or bridleways so it may be possible to see some of these animals whilst out on walks, but please keep to the paths.



The Countryside Code

Respect other people

- Consider the local community and other people enjoying the outdoors
- Park carefully so access to gateways and driveways are clear
- Leave gates and property as you find them
- Follow paths but give way to others when narrow

Protect the natural environment

- Leave no trace of your visit, take all litter home
- Don't have BBQs or fires
- Keep dogs under effective control
- Dog poo – bag it and bin it

Enjoy the outdoors

- Plan ahead, check what facilities are open, be prepared
- Follow advice and local signs and obey social distancing measures

From Natural England Countryside Code

Chignal Parish Advice

- There are no footpaths bordering the road, so wear something bright
- Cyclists do not travel side by side as traffic can be wide and fill the road