



SHAFTESBURY ESTATE

ANNUAL ECOLOGICAL MONITORING REPORT

2022

Executive Summary

This report sets out the findings of the ecological monitoring surveys undertaken on the Shaftesbury Estate (Fig. 1) in 2022. The following people were involved in these surveys; Ian Sibsey (Birds and Mammals), Clare Buckerfield (Farming Wildlife Advisory Group (FWAG) & Cranborne Chase Farm Cluster), Katie Pollard & Colin Morris (Bats), Rob & Cath Morrison (Butterflies & Odonata), Ellie Ness (Game & Wildlife Conservation Trust (GWCT)) (Barn owls for Cranborne Farm Cluster), Dorset Flora Group (Dorset Wildlife Trust (DWT)), Jan Andrews (Deer), Stephen Egerton-Read (White-tailed eagle) and Linda Bunting & others (Riverfly Monitoring Scheme, DWT).

In 2020, Lord Shaftesbury commissioned the first environmental audit of the Shaftesbury Estate, collating all available ecological monitoring surveys undertaken between 1980 and 2020. Many ecologists and groups were involved in these surveys on a wide variety of species and habitats.

Data for this audit was provided by many individuals, including Dorset Environmental Records Centre (DERC) and Dorset Wildlife Trust. The Multi-Agency Geographic Information for Communities (MAGIC) website, maintained by the Department of the Environment, Farming & Rural Affairs (DEFRA), was also used for information on protected sites.

Much of the Estate is also in Environmental Stewardship. Lord Shaftesbury and Andy Meecham (Farm Manager) have provided information on this. The Estate is also part of Cranborne Chase Farm Cluster, which currently includes 18 farms, whose aims are to protect and enhance the landscape, habitats and biodiversity of the areas they occupy on Cranborne Chase (Fig. 2). The farm cluster group was first formed in May 2019 covering close to 8000ha of farmland.

With regard to protected habitats, there are; two Special Sites of Scientific Interest (SSSIs), 16 Sites of Nature Conservation Interest (SNCIs), five Ancient Semi-Natural Woodlands (ASNWs), one Dorset Wildlife Trust (DWT) Reserve, one Veteran Tree Site, two veteran London plane trees, eight ancient Yew trees and one ancient Horse chestnut, c. 16 different habitat types and six priority habitats (Figs. 3 - 6). All the land on the Estate is within the Cranborne Chase & Wiltshire Downs Area of Outstanding Natural Beauty (AONB). Many of these habitats are protected by law, e.g., The Wildlife and Countryside Act 1981 (as amended).

In addition, there are a total of c. 865 different species of flora and fauna. These include; 608 flowering plant species, 120 lichen species, 47 moss species, 424 moth species, 209 beetle species, 44 butterfly species, 103 bird species, 36 mammal species and 13 damselfly and dragonfly species. Out of these, 20% of species are protected, rare and/or threatened and, as such, are protected by various wildlife legislation.

We want to thank all the individuals and organisations involved in this year's monitoring work to record the wide variety of habitats and species on the Estate. This information is vital to support Lord Shaftesbury's and Andy Meecham's work. It will ensure the long-term future of biodiversity through their careful and considered management of the land on the Estate.

Figure 1. Aerial View of Shaftesbury Estate (from Natural Capital Baseline Assessment, 2021)



Figure 2. Area of Cranborne Chase Farm Cluster

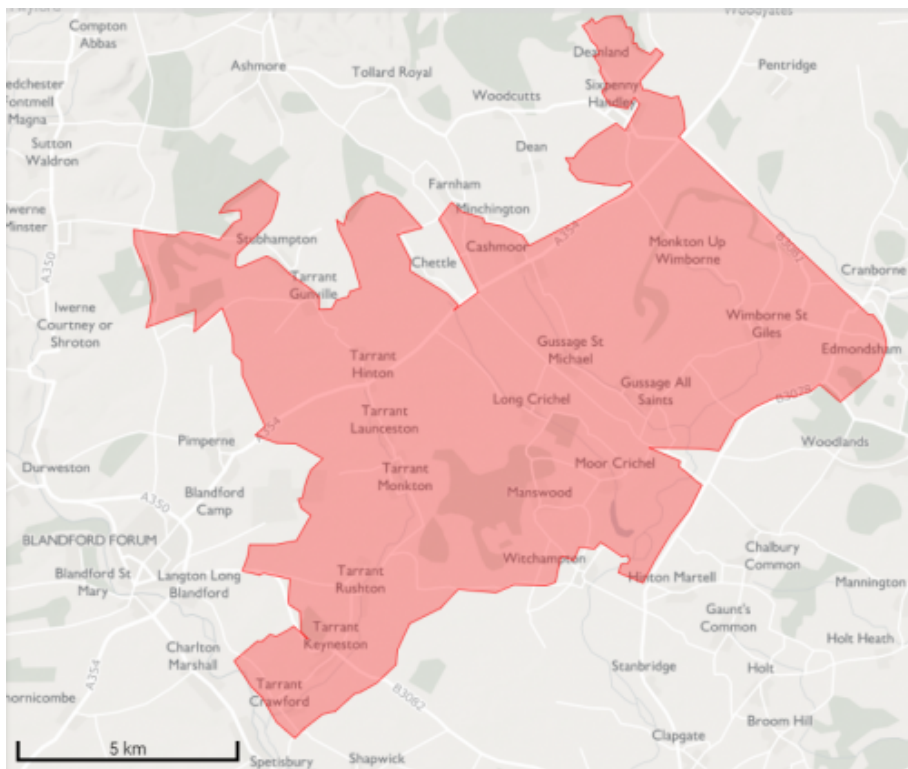


Figure 3. Special Sites of Scientific Interest (SSSIs) on & within the near vicinity of the Estate

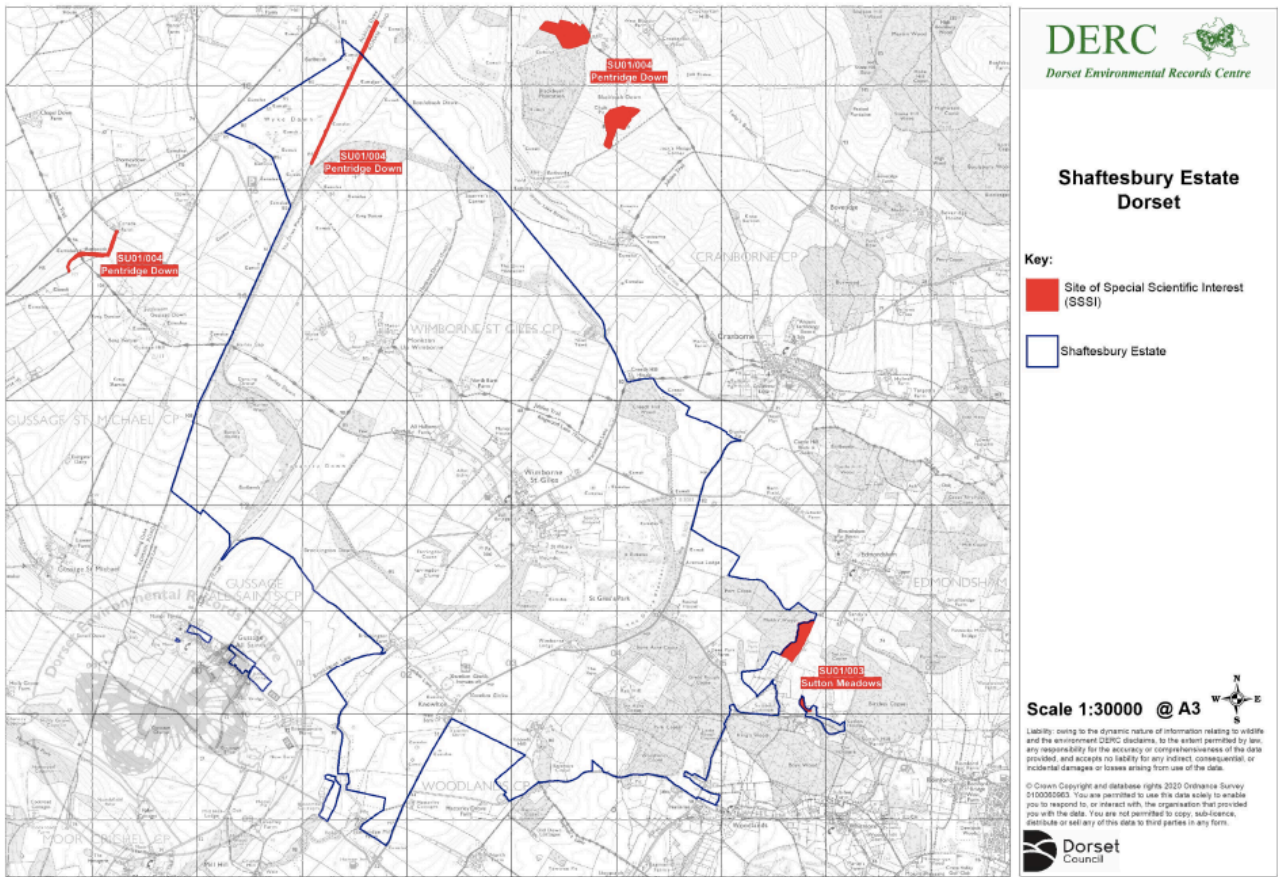


Figure 4. Types and locations of locally important sites for biodiversity on the Estate

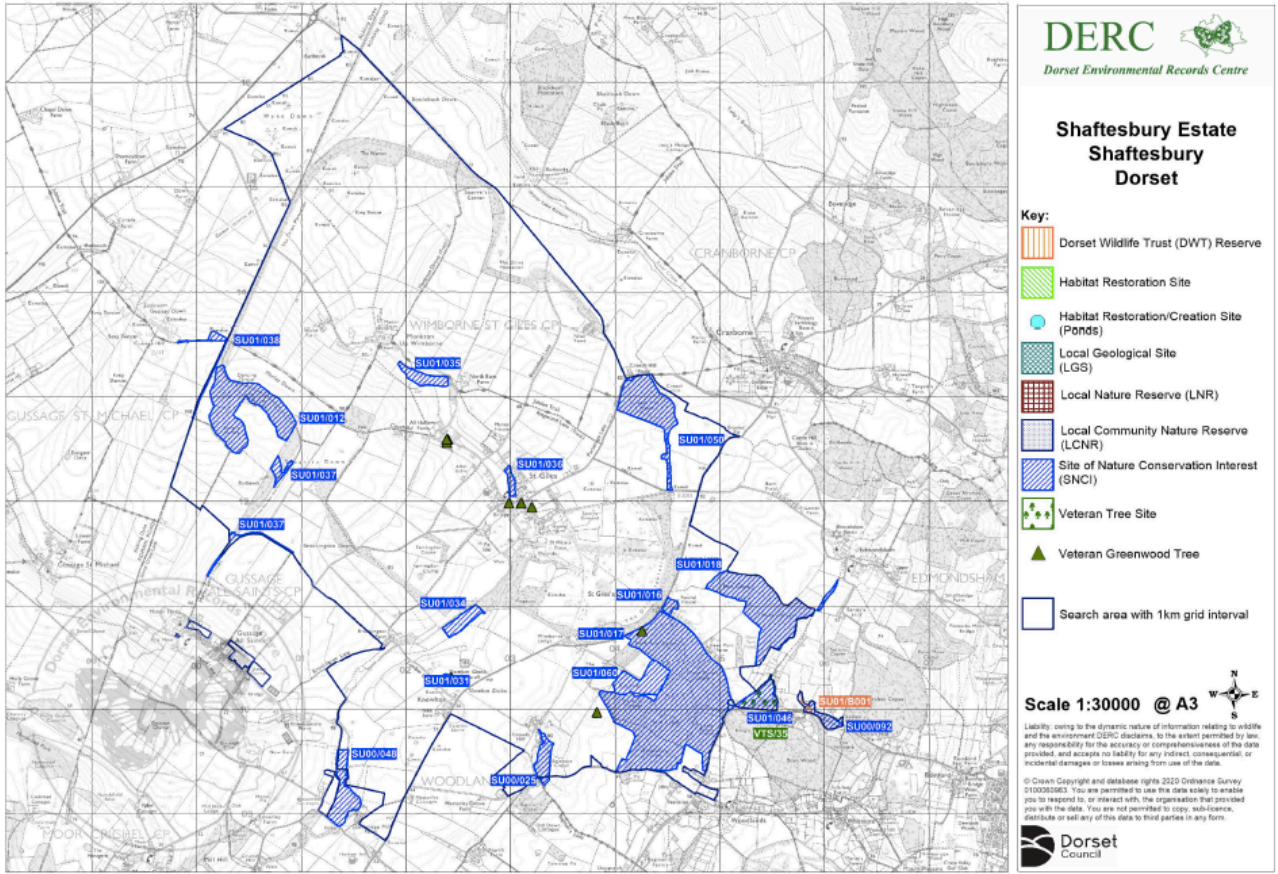


Figure 5. Habitat Map for the Estate and in the immediate vicinity

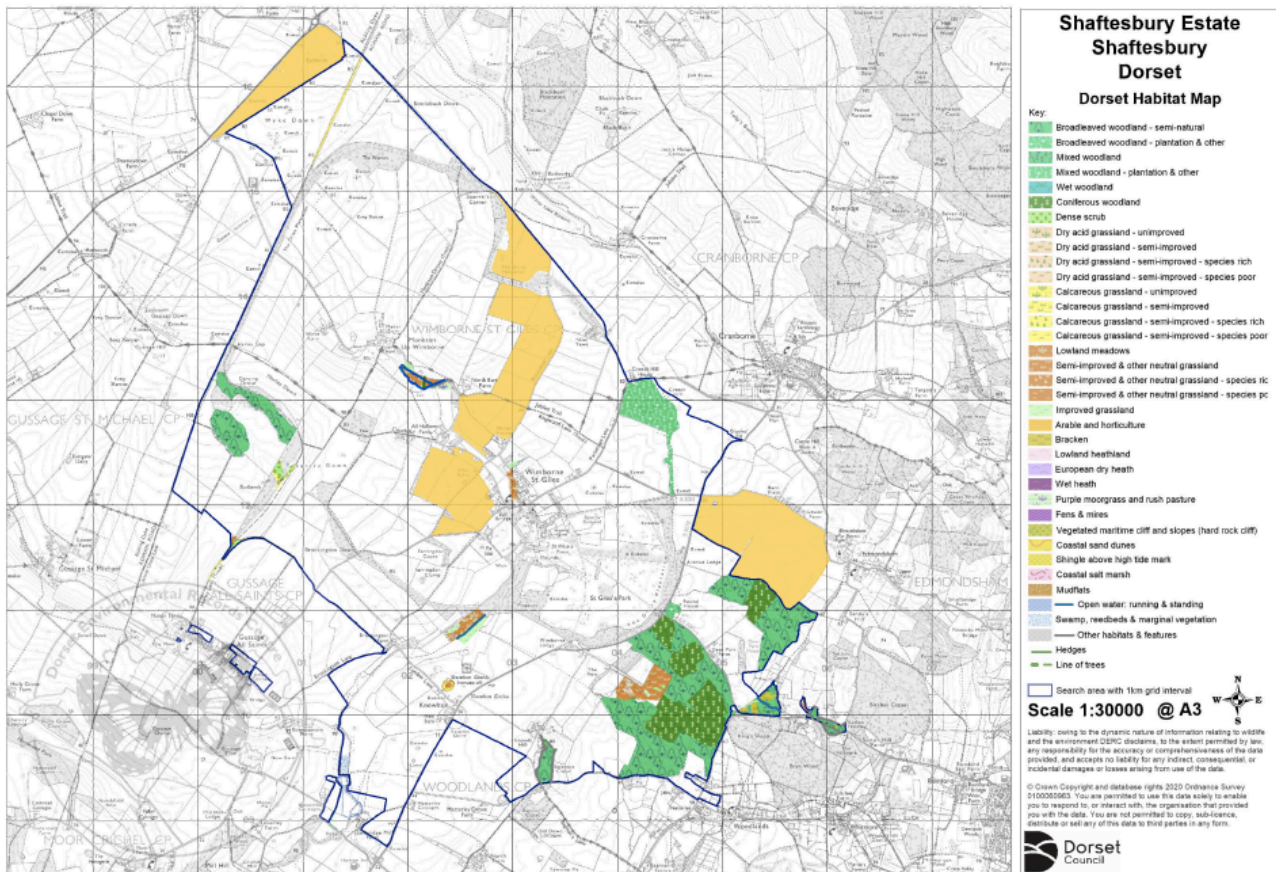
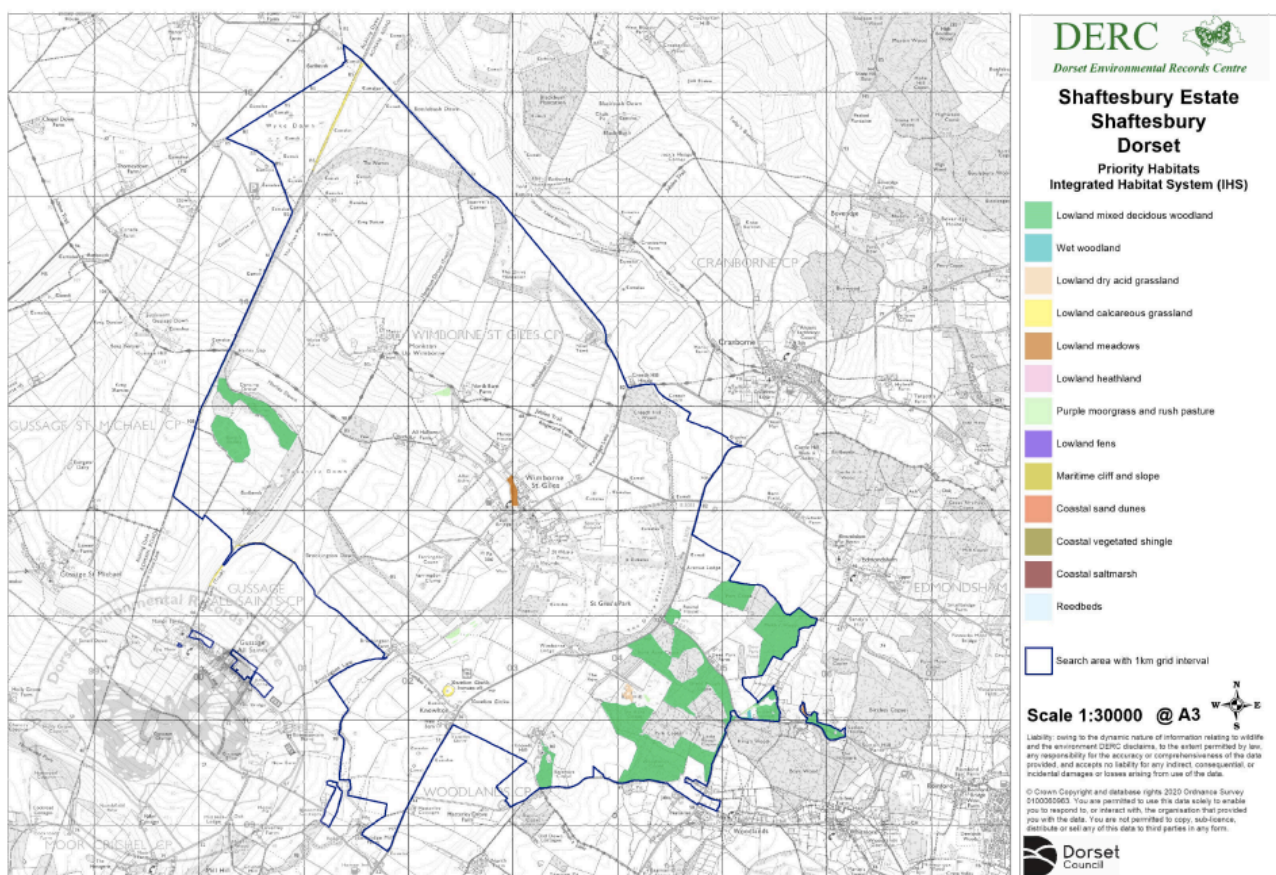


Figure 6. Priority Habitats and Integrated Habitat Systems on the Estate



Contents

Executive Summary	p.2-5
Summary	p.7-9
Birds	p.7
Bats	p.7
Butterflies	p.8
Flora	p.8
Mammals	p.8
Odonata	p.8
The Extended Riverfly Scheme	p.9
Other	p.9
1.0. Introduction	p.10
2.0. Surveys	p.10-
2.1 Birds - Wintering Birds, Breeding Birds, Barn Owls, White-tailed Eagle	p.10-17
2.2 Bats	p.17
2.3 Butterflies	p.18-20
2.4 Flora	p.20-22
2.5 Mammals (other than bats)	p.22
2.6 Odonata	p.23-24
2.7 River Fly Scheme	p.24-25
3.0. New Projects	p.25
4.0. Conclusion	p.25

Summary

This report provides findings of the monitoring for the period of 2022, of which the summarised results are set out below:

• **Birds**

Wintering and Breeding Birds

The Shaftesbury Estate continues to support a wide range of terrestrial birds and waterfowl. In 2022 from a one-kilometre grid square (SU0115), 40 bird species were recorded during the winter bird surveys carried out between December - March and 37 bird species in the April and May breeding bird surveys. This year there were 11 bird species from the Red list of birds of conservation concern and one from the Amber list of birds of conservation concern.

Ian Sibsey carried out the surveys.

Barn Owls

There are 10 Barn owl boxes on the Estate. Six boxes were checked in May 2022; two had breeding barn owls, one with a pair of Barn owls with six eggs in the Estate Yard and one with five chicks in North Barn. The other box in North Barn had the roosting male from the pair, and the box in Snows Barns also had a female barn owl with one chick. There is no data available for the other four boxes.

Ellie Ness and David Newnham carried out the surveys.

White-tailed Eagle Project

A female White-tailed Eagle has been observed and tracked over the Estate by the White-tailed Eagle Project - a partnership between Forestry England and the Roy Dennis Wildlife Foundation www.roydennis.org/isleofwight

Project Officer is Stephen Egerton-Read

• **Bats**

The most significant bat roosts on the Shaftesbury Estate continue to be the maternity and hibernation roosts for Greater horseshoe (GHS) bats. Colin Morris has monitored the GHS bats on the Estate for over 25 years. GHS bats hibernate in Home Farm, Grooms Cottage and the New Bat House and use Grooms Cottage and St Giles House as maternity roosts. Individual GHS bats also used the New Bat House during the summer.

Other bat species recorded on the Estate are; Common pipistrelle, Soprano pipistrelle, Noctule, Grey long-eared, Brown long-eared, Natterer's, Serotine and Myotis species.

Colin Morris and Katie Pollard carried out the surveys.

- **Butterflies**

A total of 18/19 species of butterflies were recorded from a kilometre square (SU0210) near Knowlton between May to August 2022, with nearly 400 individuals recorded in July 2022. For more information on butterflies in Dorset, go to www.dorsetbutterflies.com/species/

Rob and Cath Morrison carried out the surveys.

- **Flora**

SNCI - Creech Wood Hill

Volunteers from the Dorset Flora group visited the SNCI SU01/050 Creech Hill Wood in May 2022 to search for Fly Orchids. Unfortunately, this species was not found, but other species were recorded, including 11 Dorset Notable Species.

Mariko Whyte, DWT, coordinated the surveys.

Arable Field Margin

In July 2022, an arable strip on the farm that had been left out of production was surveyed to see what arable plants would appear. Results showed that this margin met the criteria for an Important Arable Plant Area (IAPA) at county level and, with one more point, would have met the nationally important level www.plantlife.org.uk/important-arable-plant-areas.

Clare Buckerfield (FWAG) and Andy Meecham coordinated the surveys on behalf of the Cranborne Farm Cluster.

- **Mammals (other than bats)**

There are no figures available for Otter, Dormice or Watervole this year. However, in addition to bats, five other mammal species were observed on the Estate in 2022. These are; Brown hare, Grey Squirrel, Roe and Red deer.

Ian Sibsey collected this data during the Breeding Bird Surveys.

Deer - Deer census figures are also available for the past eight years. Data shows the number of Roe deer is managed at around 85 on the Estate. Data from Jan Andrews.

- **Odonata**

A total of nine species of dragonfly and damselfly were recorded from kilometre square (SU0210), with a total of 93 individuals.

Rob and Cath Morrison carried out the surveys.

- **The Extended Riverfly Scheme**

Eight target groups were surveyed in August 2022. Seven were recorded in the river, the most numerous of which were Freshwater shrimps and Olive mayflies.

The surveys were supervised by Mitch Perkins (formerly of the Environment Agency) and Dave Price with Linda Bunting and Philippa Hammond for Dorset Wildlife Trust's Extended Riverfly Scheme.

The contact at DWT is Angus Menzies.

- **Other**

- A stone loach was observed by Rob & Cath Morrison in one of the feeder streams.
- In 2022, Andy Meecham won Best Conservation Farm in the Holt Agricultural Discussion Club for presenting and discussing the conservation work on the Estate. This Discussion Club's established in 1946.
- There is a collection of exotic oak species from around the world on the Estate, including many rarities and several species threatened with extinction.
- Also, in 2021, NatCap Research produced a baseline report for the Shaftesbury Estate. The report provides an evidence base for determining where to protect the natural capital and where there may be potential for income. The assessment mapped the type and extent of the different natural capital stocks on the Estate. It provided estimates of the ecosystem services they provide. The report will help to plan future land management, natural capital enhancement and improvements and revenue generation.

1.0. Introduction

This annual monitoring report sets out the species recorded on the Shaftesbury Estate in 2022 by many recorders. This report will be an addendum to the Environmental Audit 2020 that collated all the data made available to the Estate between 1980 - 2020.

The surveys will provide data upon which informed decisions can be made on enhancement measures for biodiversity and managing habitats such as woodland, hedgerows, meadows, and river corridor. These habitats support a wide variety of species, and targeted management can be used to increase biodiversity across the Shaftesbury Estate.

2.0. Surveys

2.1. Birds

The British Trust for Ornithology (BTO)/Joint Nature Conservancy Council (JNCC)/Royal Society of the Protection of Birds (RSPB) Bird Surveys are the main scheme for monitoring the population changes of the UK's common and widespread bird population (and mammals).

• **Wintering Bird Survey - Ian Sibsey**

Four Wintering Bird Surveys (WBS) were carried out on kilometre square SU0115 (Fig. 7) in December 2021, January, February and March 2022 by Ian Sibsey.

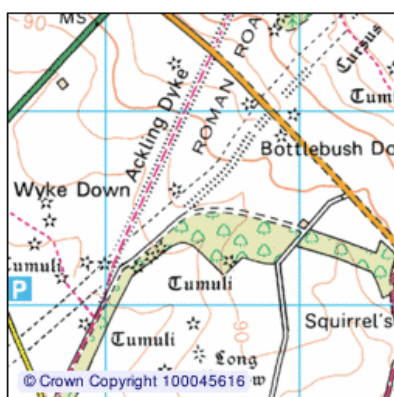
• **Breeding Bird Survey - Ian Sibsey**

Method

A Breeding Bird Survey (BBS) was carried out on kilometre square SU0115 on 24th May 2021, and 27th May 2021 by Ian Sibsey (Fig. 7). The British Trust for Ornithology (BTO)/ Joint Nature Conservancy Council (JNCC)/RSPB Breeding Bird Survey (BBS) is the main scheme for monitoring the population changes of the UK's common and widespread breeding birds, producing population trends for 117 bird and nine mammal species.

The survey involves two early morning spring visits to an allocated 1 km square to count all the birds seen or heard while walking two 1 km lines across the square and record any nest counts for colonial nesting birds in the square.

Figure 7. SU0115 km square for surveying and recording



Results

Wintering Bird Survey - A total of 40 bird species were recorded, incl. Linnet, Starling, Song thrush and Mistle thrush all of which are on the red list of birds of conservation concern and Meadow pipit and Stock dove on the amber list of birds of conservation concern (Stanbury *et al.*, 2021). A complete list of species is detailed in Table 1.

Breeding Bird Survey - A total of 37 bird species were recorded, incl. Corn bunting, Cuckoo, Fieldfare, Herring gull, Linnet, Redwing, Skylark, Song thrush, Spotted flycatcher, Starling and Yellowhammer on the red list of birds of conservation concern. Only one bird was observed on the Amber list of birds of conservation concern, the Dunnock (Stanbury *et al.*, 2021). A complete list of species is detailed in Table 1.

Table 1. Bird species and numbers recorded during winter and breeding bird surveys

Species / Month	Dec	Jan	Feb	Mar		Apr	May	Total
Blackbird	19	20	24	24		13	13	113
Blackcap						7	12	19
Blue Tit	4	6	5	5		4	8	32
Bullfinch	7	0	0	0				7
Buzzard	5	8	5	2		1	1	22
Carrion crow	4	3	7	53		13	5	85
Chaffinch	6	13	23	24		19	18	103
Chiffchaff	0	0	0	6		6	1	13
Corn bunting	27	3	8	9		10	7	64
Cuckoo							1	1
Dunnock	1	1	4	2		3	1	12
Goldcrest						3		3
Goldfinch	8	4	0	16		19	7	54
Great black-backed gull	0	0	0	2		2		4
Great spotted woodpecker	1	1	0	0				2
Great tit	3	1	0	3		4	3	14
Herring gull	3	15	0	70		23		111
Jackdaw						6	1	7
Jay	2	0	0	0				2
Kestrel						1		1

Species / Month	Dec	Jan	Feb	Mar		Apr	May	Total
Lesser black-backed gull	0	0	0	6		11		17
Linnet	0	0	3	3		18	3	27
Long-tailed tit	3	0	0	5		2		10
Magpie	0	1	0	0				1
Meadow pipit	3	3	10	0				16
Mistle thrush	0	0	1	3		1	1	6
Nuthatch	0	4	0	1		2	1	8
Pheasant	11	1	4	18		16	15	65
Raven	0	0	0	5				5
Red kite	2	4	1	2		1	2	12
Red-legged partridge	4	0	6	10		9	2	31
Redwing	197	87	11	0				295
Robin	7	19	23	16		13	19	97
Rook	0	2	0	2		12	8	24
Skylark	14	3	6	18		13	30	84
Song thrush	6	2	7	4		3	2	24
Sparrowhawk	0	1	0	0				1
Starling	2	21	51	44				118
Stock dove	1	1	0	4				6
Stonechat						2	2	4
Swallow						2	1	3
Whitethroat						1	1	2
Woodlark	0	0	0	2				2
Wood pigeon	94	71	58	121		45	61	450
Wren	9	7	7	24		19	18	84
Yellowhammer	0	3	11	10		11	12	47
Total	442	305	254	504		295	256	2056

Bird species can be added to the Red List for several reasons; they are threatened with global extinction, they have undergone a severe historical population decline in the UK since 1800, breeding numbers in the UK have fallen by at least half in the last 25 years, or longer and/or their breeding range in the UK has had a severe contraction of at least 50% over the previous 25 years or longer. Please also see - <https://britishbirds.co.uk/content/status-our-bird-populations>

Discussion

Although this is still early days on the Breeding Bird Survey transect, it's good to see Corn bunting and Yellowhammer throughout the year, together with the odd migrant. As a snapshot, Fieldfare, Redwing, and Wood pigeon counts are significantly down, which could be due to many reasons, i.e., birds arriving earlier, wind damage, etc. The first sighting of a White-tailed eagle on the Estate (ref. White-tailed eagle project). It also might be the first record for the breeding bird survey for Spotted flycatchers.

• Barn Owls - Ellie Ness and David Newnham

Method

There are 10 Barn owl boxes up on the Estate (Fig. 8). In May 2022, checks were made to six of the boxes by Ellie Ness (GWCT) and David Newnham to look for signs of breeding, with occupied boxes getting more checks to monitor the success of the brood. The locations of these boxes are; Oak Tree, Warren Barn, Framptons Barn, North Barn (two boxes), Estate Yard (drying shed), Knowle Hill Barn and Snows Barns Garden.

Figure 8. Location of Barn Owl Boxes on the Estate



Results

Four of the Barn owl boxes are being used by Barn owls in the six locations monitored by GWCT. Two boxes had breeding Barn owls, one with a pair of Barn owls with six eggs in the Estate Yard and one with five chicks in North Barn (Figs. 9 & 10). The other box in North Barn had the roosting male from the pair, and the box in Snows Barns also had a female barn owl with one chick. The box in Warren Barn had a Kestrel sitting on five eggs.

Figure 9. Barn owl pair with eggs



Figure 10. Barn owl chicks



There is currently no data for the other four locations at Bramble Field and Charlton Dairy, All Hallows and Brockington.

Discussion

A good number of Barn owls use the Shaftesbury Estate to breed, roost and forage. Opportunities for Barn owls to roost have been provided by the Estate in barns and by putting up Barn owl boxes in various locations around the Estate. The four boxes for which no current data is available will be monitored in 2023.

• White-tailed Eagle Project

The White-tailed Eagle Project - a partnership between Forestry England and the Roy Dennis Wildlife Foundation with additional support from conservation organisations and other key stakeholders www.roydennis.org/isleofwight/ contacted the Estate in 2022. The project officer is Steve Egerton-Read.

The White-tailed Eagle (Fig. 11), or Sea Eagle, is Britain's largest bird of prey with an eight-foot wingspan. White-tailed Eagles used to be found across the UK but are now one of our rarest species and are listed as [species of Conservation Concern](#).

The project aims to restore a population of White-tailed Eagles to the South Coast of England. The project has been [granted licences by Natural England](#) and Scottish Natural Heritage to begin an English reintroduction of this species in partnership with Forestry England, based on the Isle of Wight. The released birds will regard the area as home and remain to breed in future years. White-tailed Eagles have been successfully reintroduced to Scotland and Ireland. The first six birds were released in August 2019.

Figure 11. White-tailed eagle



In 2022, Steve Egerton-Read contacted Lord Shaftesbury and Andy Meecham to discuss the project and show them the movements of one of the female White-tailed eagles (G318) over the Estate and England and Wales. Truly fascinating.

The movements of G318's (Fig. 12) show some of the more recent points from the past couple of months (September - October) over North Dorset, including over the Shaftesbury Estate. The female bird generally favoured those arable fields just north of Monkton Up Wimborne and the wet grassland near Knowlton. As well as Figure 9, there is also a map (Fig. 13) detailing the bird's movements since release, briefly exploring large parts of northern England and Wales.

In November 2022, a male White-tailed eagle released by the project in 2021 (G816) was recorded over the Estate on w/c 14th November and until the weekend. This is a 2nd year male and has been in south Wiltshire and Dorset much of the past year, but this is the first time he has visited the Shaftesbury Estate.

He seems to favour the fields just southwest of the B3078 near Knowlton. He's also perched by the southern most edge of the lake in the gardens of St. Giles house on occasion.

Figure 12. Points recorded for female White-tail Eagle in North Dorset

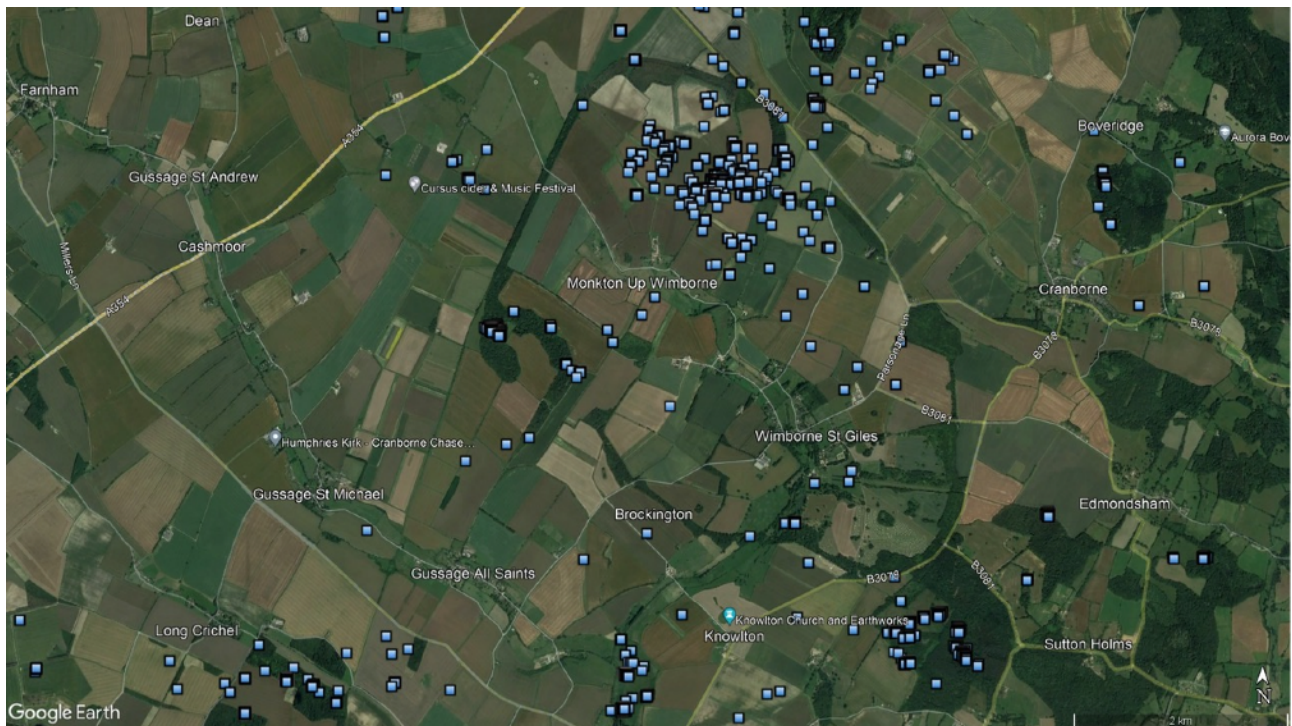
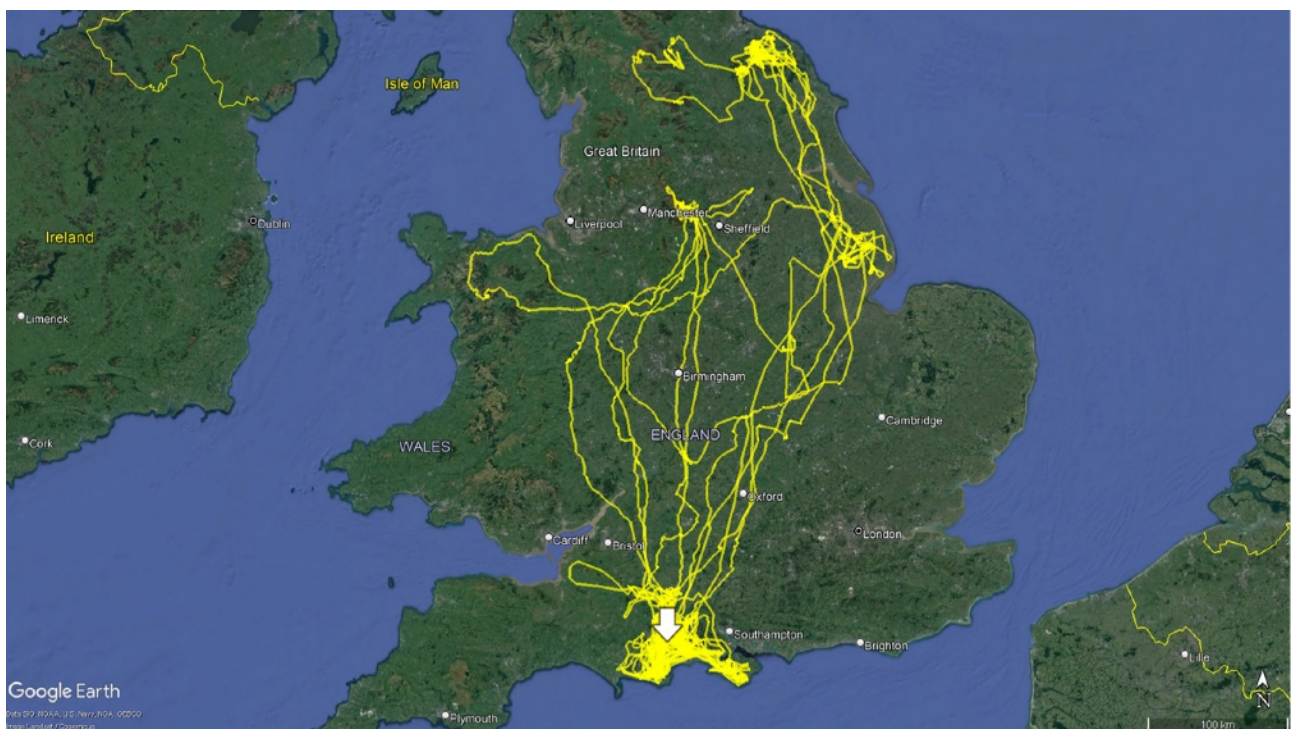


Figure 13. Movements of female White-tail Eagle over England and Wales since release



• Incidental Bird Records - Rob and Cath Morrison

In May, the following warblers were noted; Whitethroat, Black Cap, Cettis warbler, Reed warbler and Chiffchaff. Finches noted were; Green, Gold, Bull and Chaffinch. One Little Egret, two Buzzards and one Great spotted woodpecker were observed and one Cuckoo was heard. In addition, there were plenty of Pheasants and one Red-legged partridge.

In June, two Herons, a single Buzzard and Kingfisher, Cettis, Reed and Sedge warblers, Blackcap and Whitethroat, were heard. A few swallows were also observed.

In August, only a small number of birds were observed. Of note was a family of four Spotted flycatchers, a pair of Herons, a single Little egret, a Buzzard, and a Kestrel. There were also plenty of Linnets recorded.

2.2. Bats

• Greater Horseshoe Bat Survey - Colin Morris

Method

Colin Morris conducted a hibernation bat survey in February 2022 of Home Farm, Grooms Cottage and the New Bat House. Summer bats surveys were undertaken by Colin Morris on 7th July and 18th July 2022 of St Giles House, New Bat House and Grooms Cottage.

Results

Greater horseshoe bats use three buildings as main roost sites - St Giles House, Grooms Cottage, and Home Farm. The New Bat House, explicitly designed for GHS bats, is used on an ad-hoc basis for this species and by Brown long-eared bats.

A total of 180 adults and 115 babies were recorded on the 7th July 2022, and 162 adults and 117 babies on the 18th July 2022.

In addition, other bats recorded flying about during surveys were; Common pipistrelle, Soprano pipistrelle, Serotine, Noctule and a couple of Myotis species, e.g., Natterer's and another (not identified to species).

Discussion

The numbers of adult GHS bats have now returned to normal levels following renovation works to Grooms Cottage. This is good news and shows that the work on this building was carried out successfully to maintain the favourable conservation status of this species. Natural England interprets favourable conservation status as the situation in which a habitat or species is thriving throughout its natural range and is expected to continue to thrive into the future.

The Shaftesbury Estate provides significant roosting, foraging and commuting opportunities for GHS bats. The buildings of St Giles House, Home Barn and Grooms Cottage provide maternity and hibernation roosts. The surrounding areas, e.g., parkland, woodland, hedgerows, meadows and river corridor, provide suitable habitat for GHS and many other bat species.

• Bats & Planning - Katie Pollard & Colin Morris

A planning application has been submitted to Dorset Council to convert Middle Barn for recreational use. A European Protected Species Licence will have to be granted by Natural England before any work commencing on-site to ensure the long-term viability of the GHS roost.

2.3. Butterflies - Rob & Cath Morrison

Method

The Wider Countryside Butterfly Survey (WCBS) is the main scheme for monitoring the population changes of the UK's common and widespread butterflies. It is important in assessing the changing status of widespread butterfly species and providing an indicator of the health of the wider countryside. Data from this scheme feeds into the UK Butterfly Monitoring Scheme (UKBMS). The UK Butterfly Monitoring Scheme is organised and funded by [Butterfly Conservation](#), the [Centre for Ecology and Hydrology](#), British Trust for Ornithology, and the [Joint Nature Conservation Committee](#).

WCB surveys were carried out by Rob & Cath Morrison in May, June, July and August 2022 at Knowlton SU0210 (Fig. 14). This kilometre square is to the South of the River Allen. There were ten monitoring (sections) points 1 - 10. Conditions recorded on each survey were; Time of survey, Wind direction, Temperature°C, Wind speed and Sun %.

The results from each survey were submitted to UKBMS Wider Countryside Butterfly Survey and the Dorset Butterfly Conservation branch.

Figure 14. SU0210 km square for surveying and recording



Results

In May 2022, 68 butterflies were observed from seven species (Table 2). In June, the numbers increased to 316 individuals from 11 species; in July, a total of 396 individuals from 13 species and in August, there were 66 individuals from 10 species. In August, few butterflies were observed, similar to observations made by the recorders in other areas of Dorset in the same month.

The most numerous species were Meadow brown (just over 200 in the June and July counts), followed in lesser numbers by Small white, Small/Essex skipper and Green-veined white. All of the butterfly species observed are widespread.

There was a good influx of Clouded yellows in Dorset in 2022, and they have been observed laying eggs. This butterfly's native breeding habitat is around the Mediterranean, from which it migrates northward, including to the UK.

Table 2. Numbers and species of butterflies observed in SU0210

Species / Month	May	June	July	August
Brimstone	14		5	1
Clouded yellow				2
Comma		1	6	
Essex skipper (Fig. 15)			2	
Gatekeeper				
Gatekeeper/Hedge brown			22	6
Green-veined white (Fig. 16)	34	1		11
Holly blue	1			
Large skipper		18		
Large white		1	4	1
Marbled white		30	5	
Meadow brown		211	219	22
Orange tip (Fig. 17)	13			
Peacock	3		8	
Red admiral	1	2	2	2
Ringlet (Fig. 18)		14	14	1
Small Essex skipper		29		
Small tortoiseshell	2	3	1	
Small white		6	60	18
Small/Essex skipper			48	
Speckled wood				2
Total	68	316	396	66

Figure 15. Essex Skipper



Photo: Rob Morrison

Figure 16. Green-veined white



Photo: Rob Morrison

Figure 17. Orange tip egg in Ladys smock



Photo: Rob Morrison

Figure 18. Ringlet



Photo: Rob Morrison

Discussion

The numbers of butterflies and species observed in May are commensurate with what would be expected at this time of year. In June and July, the number of butterflies increased as the availability of food sources increased. However, by August, low numbers of butterflies were observed due to the continuing dry weather, which meant there were few flowering plants to attract the butterflies. The food plants present were also in a very poor, dried state, and thus it may be that many butterflies have moved elsewhere. The Nationwide data needs to be compiled and interpreted before we know whether this is the case. The summer drought and heatwave impacted breeding bird success; whether that was a reaction to the poor food supply or heat intolerance is yet to be calculated from statistical analysis.

2.4. Flora

• Site of Nature Conservation Interest (SNCI) - Creech Wood Hill - Dorset Wildlife Trust

Volunteers from the Dorset Flora group visited the SNCI SU01/050 Creech Hill Wood in May 2022 to search for Fly Orchids. None were found, but other species were recorded (80 in total), including 11 Dorset Notable Species. 'Dorset Notables' are species identified as indicators of good quality habitats in Dorset. They are often used as a basis for the assessment of SNCIs. Usually, the more characteristic notable species a site supports, the better an example of the habitat it is.

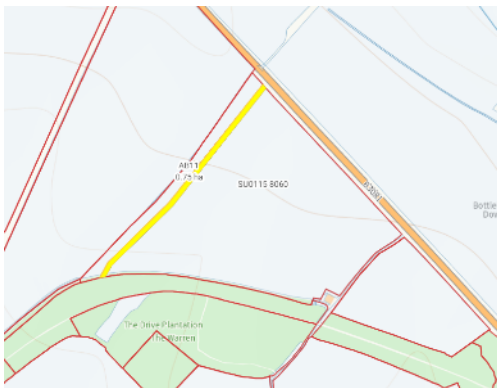
The Dorset Notable species were; Spurge-laurel, Woodruff, Cowslip, Wood Speedwell, Wood Anemone, Spindle, Wood Spurge, Wood Melick, Butcher's-broom, Sanicle and Early Dog-violet.

More information on Dorset Notable species and the habitats they are associated with on the Dorset Environmental Records Centre website: [DN Plants by Habitat \(Nov2022\)](#)

- **Arable Field Margin Survey - Clare Buckerfield, Carolyn Steele, Robin Walls & H Darragh**

In July 2022, an arable strip on the farm which had been left out of production to see what arable plants would appear was surveyed (Fig. 19). This was paid for under the Farming in Protected Landscapes (FiPL) Scheme funded by the Department for Environment, Food, and Rural Affairs.

Figure 19. Cultivated margin in parcel SU0115 8060



Thirty-four species were recorded in the arable field margin (Table 3). Scores under the criteria for an IAPA were calculated, with six species scoring to count towards the final IAPA score. These were; Dwarf spurge, Field madder, Henbit dead-nettle, Night-flowering catchfly, Rough poppy and Venus's-looking-glass. The total score was 24. This means that this margin met the criteria for an Important Arable Plant Area (IAPA) at county level and, with one more point, would have met the nationally important level www.plantlife.org.uk/important-arable-plant-areas.

Table 3. Species recorded in field margin in parcel SU0115 8060

Species		Species	
Barren Brome		Groundsel	
Black-bindweed		Hedge Mustard	
Charlock		Henbit Dead-nettle	1
Common Field-speedwell		Hogweed	
Common Fumitory		Knotgrass	
Common Poppy		Musk Thistle	
Common Ragwort		Night-flowering catchfly	7
Creeping Thistle		Perennial Sow-thistle	
Cut-leaved Crane's-bill		Pineapple mayweed	
Dove's-foot Crane's-bill		Prickly Sow-thistle	
Dwarf Spurge	6	Rape	
False Oat-grass		Red Bartsia	
Field Forget-me-not		Rough Poppy	3
Field Madder	1	Scarlet Pimpernel	
Field Pansy		Shepherd's-purse	
Fool's Parsley		Short-fruited Willowherb	
		Upright Hedge-parsley	
		Venus's-looking-glass	6

Key:

6	Near threatened
7	Threatened - Vulnerable
1	Species of local concern
3	Species of local concern

2.5. Mammals (not bats)

- Ian Sibsey - Mammal recording was introduced to the Breeding Bird Survey (BBS) in 1995 to help improve knowledge of the distribution and population trends of some of our commoner mammals. Sightings or signs of mammals are recorded in the BBS square, as these are used to produce mammal population trends.

In April, 23 Brown hares, 1 Grey squirrel and 4 Roe deer were observed in grid SU0115, and in May, 19 Brown hares, 1 Grey squirrel, 5 Red deer and 14 Roe deer were recorded. Brown hares had a good year in 2022, and numbers were 11+ up on this time last year.

- Rob & Cath Morrison - In addition, in June, three Roe deer and one Hare leveret were observed in SU2010.

2.6. Odonata - Rob & Cath Morrison

Method

Rob & Cath Morrison carried out four surveys for dragonfly and damselfly species in May, June, July and August 2022 at Knowlton in kilometre SU0210. This kilometre square is to the south of the River Allen. There were ten monitoring (sections) points 1 - 10. Conditions recorded on each survey were; Time of survey, Wind direction, Temperature°C, Wind speed and Sun %.

Results

There are 17 species of damselfly and 23 species of dragonfly resident in the UK, with the occasional visitor from continental Europe. In 2022, six species of damselfly and five species of dragonfly were recorded over the four surveys in this km grid square (Table 4). The most common species was the Banded demoiselle, followed by the Common blue damselfly. Both Golden-ring dragonfly and Keeled skipper were only recorded once in June.

Table 4. Damselfly and dragonfly species recorded in 2022

	May	June	July	August	Total
Banded demoiselle (Fig. 20)		8	12	4	24
Beautiful demoiselle	2		6	1	9
Black-tailed skimmer		2			2
Blue-tailed damselfly		1	2		3
Broad-bodied chaser	1	2	4		7
Common blue damselfly		11	6		17
Common darter (Fig. 21)		3	1	5	9
Emperor damselfly			1		1
Golden-ring dragonfly			1		1
Keeled skipper (Fig. 22)			2		2
Large red damselfly (Fig. 23)	9				9
Total	12	36	35	10	

Discussion

This year two species were observed - Keeled skipper (Fig. 19) and Large red damselfly (Fig. 20), that were not recorded in this area last year.

Figure 20. Banded demoiselle



Figure 21. Common darter



Figure 22. Keeled skipper



Figure 23. Large red damselfly



2.7. River Fly Scheme - River Allen - Dorset Wildlife Trust

The standard nationwide Riverfly survey is designed to detect a severe pollution event by sampling, identifying, and counting eight invertebrate groups, the aquatic stages of mayflies, caddisflies, stoneflies, and freshwater shrimps. However, some rivers support a different range of invertebrates and are more complex. With funding from the Vitacress Conservation Trust, the Freshwater Biological Association, DWT, and the Lincolnshire Chalk Streams Project are working together to develop a scheme of 33 invertebrates to help provide a more comprehensive analysis of our rivers and streams. The Riverfly Monitoring scheme is coordinated by DWT (James Parkin & Angus Menzies). Currently, it has 40 volunteer monitors covering over 50 sites across Dorset.

Method

The basis of the survey is 'kick sampling', which involves gently kicking the bottom of the river, then waiting with a net for three minutes to catch and identify the species which are released. They are then quickly and safely returned to the river.

The one Riverfly survey was a demonstration to volunteers of the method of sampling. Although the results are interesting, they will not be included in the data for this river.

Results

Seven of the eight target groups were present in this section of the river. These were; Cased caddis, Caseless caddis, Mayflies, Blue-winged olives, Flat-bodied and Olive Up-wings, Stoneflies and Freshwater shrimp.

The most common groups were freshwater shrimp, Olives, and Blue-winged olives. The water depth varied from 25 - 35 cm, measuring close, middle and far.

Table 5. Species found in river from kick sampling

Target Group	Category	Estimated Number	
Cased caddis flies	1	2	
Uncased caddis flies	1	2	
Mayflies	0	0	
Blue-winged olives	2	10	
Flat-bodied	0	0	
Olives	2	20	
Stoneflies	1	1	
Freshwater shrimp	1	50	
	9		
	River Depth Close (cm)	30	
	River Depth Middle (cm)	25	
	River Depth Far (cm)	35	

Discussion

This survey was the first to be undertaken in this Riverfly monitoring scheme. A schedule of samples will be taken throughout 2023, and the results will be made available.

3.0. New Projects

New projects/surveys started in 2022 with no data available yet, or starting in 2023;

- Ancient Tree Inventory - Mike Squire is also carrying out an Ancient Tree Inventory. He is a member of Dorset Wildlife Trust and will share his results with Dorset Environmental Records Centre.
- Dorset Ancient Woodland Inventory - Dorset Environmental Records Centre (DERC) are re-doing the Dorset Ancient Woodland Inventory. There are quite a few discrepancies between the old Ancient Woodland Inventory (AWI) and the historical maps in those areas of the county, particularly on the clay belt from Chalbury north to Edmondsham. Part of the project is to do some ground-truthing to try and sort out the errors and to produce a more accurate and up-to-date AWI. DERCs project officer is Jo Stephens.
- Bird Lake Surveys - In February 2022, the Wetland Bird Survey Office of the British Trust of Ornithology started lake surveys on the Estate.
- Invertebrate and Algae Surveys - In August 2022, Amelia Tolley from the Environment Agency started carrying out invertebrate and algae surveys.
- Juniper - In 2023, Bryan Edwards from Dorset Environmental Records Centre will begin a Juniper survey of the Estate. There are only around 12 (native) bushes remaining in Dorset, of which it is believed there are seven on the Estate. The last record DERC has from St Giles Park (2007) is of six bushes, one dead and one collapsed north of the Beech Avenue to the East of the St Giles House.

The project aims to try and obtain some seedlings/cutting from the remaining bushes and grow some new native bushes before they are extinct in Dorset. DERC is also working with the Cranborne Estate on this project.

4.0. Conclusion

The data collected from 2022 will be reviewed by Lord Shaftesbury, Andy Meecham and Clare Buckerfield (FWAG). Up-to-date information is important to feed into the NatCap review of the ecosystem services on the Estate (2021) and to inform future projects and management initiatives that will improve the quality of habitats and the number of species for biodiversity net gain on the Shaftesbury Estate.