Forge Farm (Sandwell Valley) Preliminary Ecological Report (Summer 2014)

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Preliminary Ecological report on Forge Farm (Sandwell Valley Country Park)

Prepared by members and associates of Sandwell Valley Naturalists' Club

Executive Summary

- Seven experienced naturalists from Sandwell Valley Naturalist's Club participated in ecological survey of the Farm. They were assisted by three additional specialists.

- The team carried out various surveys on four separate days. The weather conditions were generally favourable and enabled useful data to be gathered.

- Records obtained included 169 species of plant and 5 of fungi. Nine different mammals were recorded as were some 23 different bird species. Nine different butterflies were seen and 65 moth species were found, with 50 insect species from other orders also being noted.

- The botanists' records for the Farm were particularly thorough and even enabled them to trace a likely history of soil movement in some places during the recent past. Other ecologists were able to link some plants recorded to insects found in the current surveys.

- The ecologists described features that confirmed the considerable value of the Farm as a wildlife haven. Exceptional abundance of several birds was noted and comprehensive records of their current activity were provided. Of the mammals, the special status of Hare (seen on the lower pastures) was emphasised.

- The team members found much of interest but as much more has yet to be investigated (notably the aquatic life in the stream systems), they have made fairly general recommendations with regard to conservation. These have been flavoured with the desire to see the wildlife treated with respect when regimes are reviewed for change of use.

- A map denoting areas the ecologists thought deserved particular care is given on page 28.

Introduction

Sandwell Valley Naturalists' Club received an invitation to carry out this survey on Forge Farm (grid reference **SP 024 927**) in May 2014, because funding was being sought for management of key features (notably hedges and associated space) on the derelict farm and the work was due to start in September, pending receipt of the appropriate grant.

Acknowledgements

We are indebted to Sandwell Valley Country Park Staff - in particular to Jo Miskin (Projects & Community Liaison Officer and Paul Smith (Nature Conservation Officer) for permitting the survey and for providing us with site plans and facilitating access to the Farm.

The Role of Sandwell Valley Naturalist's Club in this Survey

The purpose of the survey was to provide sufficient ecological information to managers in a relatively short space of survey time, for them to gain a useful impression of the species on site, appreciate how these fitted into the unique ecological setting of the farm and assist them in drawing up a series of conservation priorities appropriate for developing change of land use on the site.

Survey Dates, weather conditions and type of survey

May 30th 2014 (Morning: 1100 - 1300hrs) weather cloudy with some sun after heavy rain (T circa 20°C). **Botany, mycology, ornithology, invertebrate study and general ecological reconnaissance.**

July 25th 2014 (Morning: 1000-1300hrs) weather hot and sunny (T 27-28°C). **Botany, ornithology, study of insect habitats and site photography.**

July 28th 2014 (Morning). Weather sunny and hot (T 25°C). Time 1100- 1200 **am analysis of cow dung for associated beetles.** (Afternoon): 13.00-15.00 hours) **Botany on selected areas of the site.**

August 3rd (Evening):8.45- 11.45 pm misty with a slight breeze (T10°C) **Light trapping of moths in the Farm Buildings. Preliminary bat survey**

Ecologists and attendance.

The survey was carried out by the following members: The key areas of expertise are given, but all members got involved in making cross- disciplinary observations, teamwork being a priority.

M.G.Bloxham: (Co-ordination, invertebrate issues), all events.

W.Moodie: (Fungi) 1 morning May 30th.

M. Poulton: (Botany) 2 mornings and one afternoon.

A.J. Purcell: (Bats, mammals and general photography) 2 mornings and one evening.

A. & M.West: (ornithology / Lepidoptera) 2 mornings and 1 evening

A. Wood: (ornithology, Lepidoptera and general entomology) 2 mornings- May 30th and July 28th.

Associated specialists: Ms S.Bucknall (Water Biology), P.Koryl (Landcare Associates-bats) and Prof. Ian Trueman (Flora of B&BC)'

The Types of survey used and Methodology.

These are described in more detail in individual reports, but it is possible to describe them broadly as follows:

Botany, Ornithology and mycology- **'Walk- over' Surveys**: These are quite informative when used by appropriately skilled field ecologists. They involve deciding on appropriate walking transects or routes, moving along these in a systematic manner taking notes (sometimes with photography, or tape recording) and producing a report with a species list and basic observations. Ornithological findings are reported in a standardised form associated with national practice. Mycologists will focus on habitats where there is evidence of fungal activity in the shape of fruiting bodies. Their survey is inevitably a slower one and the duration of the surveys here is not ideally suited for collection of samples although some assessment of the value of key habitats is always possible for the experienced worker.

Invertebrate Studies: **'Walk- over' Surveys**: General use of a sweep net with retention of species either for field identification or for subsequent inspection using a Tube or pooter. Hand search of habitats for indications of insects present and retention of individuals for further attention as necessary.

Cow dung sampling for dung beetles.

Special treatment of substrate samples by washing etc to isolate targets.

Moth Trapping

Moth trapping at light is also used to assess the population of moths active at given times of the season. Findings can often be related to botanical elements on site.

Bat detection: standard detectors were in use and also specialised cameras. These provide electronic signals/ images which can be analysed to provide species data.

Presentation of Results

A survey team consists of individuals seeing the site through different ecological eyes. For that reason the separate reports have not been amalgamated and readers will be able to see the ways in which the surveyors went about their business, what they found and also their own conclusions and recommendations for future conservation on the Farm. The reports speak for themselves and the only document that attempts to summarise the thoughts of the team is presented in the form of the appendix map which suggests two primary areas for conservation.

The Ecologists have great pleasure in presenting their separate reports

M. Bloxham (August 2014)

Forge Farm Botanical Survey Report with Additional notes on Fungi

M.Poulton and W.Moodie

Survey Dates and conditions and attendance

May 30th 2014 (Morning: 1100 - 1300hrs) weather cloudy with some sun after heavy rain (T circa 20C).**M Poulton and W Moodie**.

July 25th 2014 (Morning: 1000-1300hrs) weather hot & sunny (T 27-28C). **M. Poulton.**

28th July 2014 (Afternoon: 13.00-15.00 hours) weather hot & sunny (T circa 25c).**M. Poulton & Prof. Ian Trueman.**

Botany

Introduction

For simplicity the description of the vegetation of each field complies with the parcel number on the map provided by Sandwell Council (see page **28**). Other than the stream corridor given the parcel id 4767 which flows in a north-easterly direction from beneath the motorway to leave the site to the east of the farm buildings, all of the other parcels of land labelled are fields. The whole of Forge Farm other than the northern end of Parcel 2094 is conveniently located in the Monad SP0292. At the outset it was considered appropriate to compile one botanical species list for the whole site with a brief description of each parcel of land including the dominant flora found within it. Where it is considered appropriate the botanical interest of the hedges, streams, ditches and woodland is included in the description of the field it encloses. A summary of the dominant and more interesting vegetation found around the buildings and in the farmyard area is also described.

At the time of the surveys **Field 2094 and 4190** bordering Forge Lane were occupied by cattle with calves which made any accurate assessment of the floristic diversity in these fields very difficult. The surveys therefore comprised of no more than a brief walkthrough. Tall perennials generally avoided by livestock such as creeping thistle, spear thistle, common ragwort and common nettle were very prominent and beneath and around them perennial rye-grass and crested dog's-tail were noted suggesting it is highly likely that, along with meadow buttercup and creeping buttercup, both are common components of these fields. A defunct hedge of oak with some hazel present dissect field 2094 west to east along a raised bank. Therefore, the northern half of this field bordering Newton Road is on a higher level than the southern half.

Field 5075 is a relatively small field lying immediately to the south of the farm buildings and at the time of the survey was being utilised for horse grazing. Common ragwort and creeping thistle, plants avoided by horses, are the most prominent of the tall perennials present here. The other obvious species making up the sward were creeping and meadow buttercup along with plentiful perennial rye-grass and crested dog's-tail.

Parcel 4767 is the stream bounding the southern boundaries of Fields 5075, 3572 and 1865. Multi-trunked crack willows and old coppiced hazels dominate its banks and in places large branches and trunks of some of the crack willows have fallen across the stream and the rotting stumps have created micro-habitats exploited by fungi and mosses. The ground flora in the shade below includes patches of the invasive Indian balsam and non-native monkeyflower along with native marginal plants such as fool's water-cress and water forget-me-not.

Field 3572 similar to fields 2094, 4190 was also being grazed by cattle at the time of the surveys. A general walkthrough revealed the presence of the unpalatable meadow buttercup and creeping buttercup throughout along with large and extensive patches of creeping thistle and common ragwort. Common mouse-ear, self-heal and perennial rye-grass were also recorded but many of the more palatable common grasses and forbs one would expect to be present were more difficult to detect.

Field 1865 is similar to fields 2094, 4190 and 3572 with a ground flora comprising common ragwort, common nettle and creeping thistle the most prominent of the perennials present. A belt of mature woodland, made up predominantly of pedunculate oak with the occasional ash, is an important feature at the northern end of this field as this is the only mature woodland on the site and one which links directly to the mature trees and shrubs that screen the nearby motorway bank.

A row of tall poplar trees bounds **Field 5870** (photo on p.14) on the Forge Lane side and it is noticeable that this field is on a higher level than the fields surrounding it. Research into the farm's history has revealed that at some time during the 1980s the level of the land was raised. The reason behind this was almost certainly to improve drainage so that grazing could take place throughout the year. Where the soil was sourced from to accomplish this task is not known but prior to the raising of the land, rushes dominated the area and waterlogging was a feature for most of the year. Nowadays, a relatively wide selection of meadow grasses are found here and there are fewer rushes. The dominant species include meadow foxtail, rough meadow-grass, crested dog's-tail, smooth meadow-grass and timothy. Forbs include bulbous, creeping and meadow buttercup and extensive patches of common ragwort, which is especially abundant on the bank overlooking the stream. The presence of white clover and perennial rye-grass throughout the sward possibly indicates a sowing of these two when the field was in its infancy.

Below field 5870 to the south of the stream is **Field 6560.** This is low-lying, hard rush pasture with prominent patches of marsh thistle and great willowherb present. Also found here are yorkshire-fog, creeping bent, perennial rye-grass and crested dog's-tail. In places that remain water-saturated for most of the year extensive monocultures of common spike- rush have formed. Along the stream margins goat willow and extensive patches of great willowherb and bulrush are present, interspersed with wild angelica. Below them in the shallow water of the stream moisture-loving water-cress and fool's water-cress grow in abundance.

Field 3954 is very wet underfoot and totally dominated throughout with hard rush. So wet and overgrown is this field that in places walking through it becomes extremely difficult. Sedges recorded here include oval, hairy and prickly and forbs include great willowherb, marsh thistle, square-stalked st-john's wort, fool's water-cress, water-mint and monkeyflower. The stream labelled 4767 bounding this fields northern edge is effectively segregated from the cattle-grazed fields to the north by the many over-mature crack willows growing all along its bank. A defunct hedge is all that separates this waterlogged field from the much drier field 2646 to the east.

Field 2646 is mainly Yorkshire-fog dominated with creeping thistle and common ragwort present in places. Other grasses include common bent, crested dog's-tail and sweet vernal-grass, Jubilee Coal Tip/Swan Pool Stream separates this field from field 1543 lying adjacent to the motorway. Found along the stream in great abundance is an interesting assemblage of moisture-loving forbs which include monkeyflower, wild angelica, water forget-me-not, gipsywort and fool's water-cress.

Field 1543 lies directly next to the motorway and is dissected east to west by a ditch which at the time of the survey was dry but probably assists with drainage during the months of winter. Hard and soft rush both occur here as does common spike rush, indicating that some parts of this field remain wet

throughout the year. Patches of small sweet-grass in the south further illustrate the poorly-drained nature of parts of this field which is bounded to the south by the woodland of Jubilee Mound.

The triangular-shaped **Field 7357** is the most easterly of the fields on the farm and is similar in many ways to Field 6560 which it is separated from by a dense hawthorn hedge. This field is best described as poorly-drained rush pasture dominated by stands of hard rush. Marsh thistle and great willowherb are found here along with similar grasses that are present in the adjoining field. The densely overgrown area known as Marigold Marsh abuts this field to the south.

Farm yard and areas surrounding the farm buildings

Since its abandonment as a working farm the yard between the farmhouse and cow sheds and the consolidated tracks surrounding the farm buildings have fallen into neglect giving rise to colonisation by a wide range of annual and perennial weeds, most of them widespread and common throughout Sandwell Valley. Early colonisers of bare ground such as hairy bitter-cress, annual meadow-grass, pineappleweed, lesser trefoil and groundsel have exploited the crumbling concreted surfaces and little used tracks, and in places these are now being succeeded by some of our more aggressive perennials, grasses and woody species such as common nettle, mugwort, great willowherb, common ragwort, yorkshire-fog, false oat-grass butterfly-bush, elder and goat willow. Common nettle, creeping thistle, false oat-grass, broad-leaved dock, common chickweed, fat hen and knot-grass have exploited the nitrogen enriched heaps of straw and farmyard manure piled up along the sides of the track. The presence of three uncommon annuals, bird’s-foot, least trefoil and knotted clover, none of them previously recorded in Sandwell Valley, and growing within close proximity to each other on a mound of soil to the south of the farm buildings, suggests that soil from outside our area has been brought into the farm at some time in the past.

Forge Farm botanical species list - all in SP0292

Acer pseudoplatanus	sycamore
Achillea millefolium	yarrow
Agrostis capillaris	common bent
Agrostis stolonifera	creeping bent
Alisma plantago-aquatica	water-plantain
Alliaria petiolata	garlic mustard
Alnus glutinosa	alder
Alopecurus geniculatus	marsh foxtail
Alopecurus pratensis	meadow foxtail
Anagallis arvensis	scarlet pimpernel
Angelica sylvestris	wild angelica
Anisantha sterilis	barren brome
Anthoxanthum odoratum	sweet vernal-grass
Anthriscus sylvestris	cow parsley
Aphanes arvensis	parsley-piert
Apium nodiflorum	fool's water-cress
Arabidopsis thaliana	thale cress
Arctium minus	lesser burdock
Arrhenatherum elatius	false oat-grass
Artemisia absinthium	wormwood
Artemisia vulgaris	mugwort
Atriplex patula	common oranche
Atriplex prostrata	spear-leaved orache

Bellis perennis	daisy
Bromus hordeaceus ssp. hordeaceus	soft brome
Callitriche stagnalis	common water-starwort
Caltha palustris	marsh-marigold
Calystegia sepium	hedge bindweed
Calystegia silvatica	large bindweed
Capsella bursa-pastoris	shepherd's-purse
Cardamine pratensis	cuckooflower
Carex hirta	hairy sedge
Carex ovalis	oval sedge
Carex spicata	spiked sedge
Centaurea nigra	common knapweed
Cerastium fontanum	common mouse-ear
Cerastium glomeratum	sticky mouse-ear
Chenopodium album	fat hen
Cirsium arvense	creeping thistle
Cirsium palustre	marsh thistle
Cirsium vulgare	spear thistle
Coryllus avellana	hazel
Crataegus monogyna	hawthorn
Crepis vesicaria	beaked hawk's-beard
Cynosurus cristatus	crested dog's-tail
Dactylis glomerata	cock's-foot
Dactylorhiza praetermissa	southern marsh-orchid
Deschampsia cespitosa	tufted hair-grass
Digitalis purpurea	foxglove
Dipsacus fullonum	teasel
Dryopteris filix-mas agg.	male fern
Eleocharis palustris	common spike-rush
Elytrigia repens	common couch
Epilobium ciliatum	american willowherb
Epilobium hirsutum	great willowherb
Epilobium parviflorum	hoary willowherb
Equisetum arvense	field horsetail
Euphorbia peplus	petty spurge
Fallopia japonica	japanese knotweed
Festuca rubra	red fescue
Foeniculum vulgare	fennel
Fraxinus excelsior	ash
Galium aparine	cleavers
Geranium dissectum	cut-leaved crane's-bill
Geranium molle	dove's-foot crane's-bill
Geranium pusillum	small-flowered crane's-bill
Geranium pyrenaicum	hedgerow crane's-bill
Geranium robertianum	herb robert
Geum urbanum	wood avens
Glyceria declinata	small sweet-grass
Glyceria notata	plicate sweet-grass
Heracleum sphondylium	hogweed
holcus lanatus	yorkshire-fog

Holcus mollis	creeping soft-grass	
Hordeum vulgare s.l	barley	
Ilex aquifolium	holly	
Impatiens glandulifera	indian balsam	
Iris pseudacorus	yellow iris	
Jucus effusus	soft rush	
Juncus acutiflorus	sharp-flowered rush	
Juncus articulatus	jointed rush	
Juncus buffonius	toad rush	
Juncus effusus	soft rush	
Juncus inflexus	hard rush	
Lactuca serriola	prickly lettuce	
Lamium album	white dead-nettle	
Lapsana communis	nipplewort	
Lemna minor	common duckweed	
Scorzonaria autumnalis	autumnal hawkbit	
Lepidium coronopus	swine-cress	NVR
Lepidium didymum	lesser swine-cress	
Leucanthemum vulgare	oxeye daisy	
Lolium perenne	perennial rye-grass	
Lotus corniculatus	bird's-foot trefoil	
Lycopus europaeus	gipsywort	
Malva sylvestris	common mallow	
Matricaria discoidea	pineappleweed	
Matricaria recucita	scented mayweed	
Medicago lupulina	black medick	
Mentha aquatica	water-mint	
Mimulus guttatus	monkeyflower	
Myosotis arvensis	field forget-me-not	
Myosotis scorpiodes	water forget-me-not	
Nasturtium officinale agg.	water-cress	
Oenanthe crocata	hemlock water-dropwort	
Ornithopus perpusillus	bird's-foot	NVR
Papaver rhoeas	common poppy	
Persicaria maculosa	redshank	
Plantago lanceolata	ribwort plantain	
Plantago major	greater plantain	
Poa annua	annual meadow-grass	
Poa humilis	spreading meadow-grass	
Poa pratensis	smooth meadow-grass	
Poa trivialis	rough meadow-grass	
Polygonum aviculare agg.	knot-grass	
Populus tremula	aspen	
Populus x canadensis s.l.	hybrid black poplar	
Potentilla reptans	creeping cinquefoil	
Prunella vulgaris	self-heal	
Prunus spinosa	blackthorn	
Quercus robur	pedunculate oak	
Ranunculus acris	meadow buttercup	
Ranunculus bulbosus	bulbous buttercup	

Ranunculus repens	creeping buttercup	
Ranunculus sceleratus	celery-leaved buttercup	
Reseda luteola	weld	
Rhaphanus rhaphanistrum	wild radish	
Rosa canina agg.	dog rose	
Rubus fruticosus agg.	bramble	
Rumex acetosa	common sorrel	
Rumex acetosella s.l.	sheep's sorrel	
Rumex conglomeratus	clustered dock	
Rumex crispus	curled dock	
Rumex obtusifolius	broad-leaved dock	
Salix caprea	goat willow	
Salix fragilis	crack willow	
Sambucus nigra	elder	
Scorzonaria autumnalis	autumnal hawkbit	
Senecio jacobaea	common ragwort	
Senecio viscosus	sticky groundsel	
Senecio vulgaris	groundsel	
Silene latifolia	white campion	
Sisymbrium officinale	hedge mustard	
Solanum dulcamara	bittersweet	
Solanum nigra	black nightshade	
Sonchus arvensis	perennial sow-thistle	
Sonchus asper	prickly sow-thistle	
Sonchus oleraceus	smooth sow-thistle	
Sorbus intermedia agg.	swedish whitebeam	
Stachys sylvatica	hedge woundwort	
Stellaria media	common chickweed	
Taraxacum officinale agg.	dandelion	
Trifolium arvense	hare's-foot clover	
Trifolium campestre	hop trefoil	
Trifolium dubium	lesser trefoil	
Trifolium micranthum	least trefoil	NVR
Trifolium pratense	red clover	
Trifolium repens	white clover	
Trifolium striatum	knotted clover	NVR
Tussilago farfara	colt's-foot	
Typha latifolia	great reedmace	
Urtica dioica	common nettle	
Veronica arvensis	wall speedwell	
Veronica beccabunga	brooklime	
Veronica chamaedrys	germander speedwell	
Veronica persica	common field-speedwell	
Vicia cracca	tufted vetch	
Vicia hirsuta	hairy tare	
Vicia sativa ssp. segetalis	common vetch	
Vulpia myuros	squirrel-tail fecue	

Fungi Recorded at Forge Farm (May 30th 2014) by W.Moodie

ASCOMYCETES

Diatrype bullata on *Salix fragilis*

Leptospora rubella on dead *Urtica dioica* stem

Ophiobolus sp. on indet dead plant stem

HETEROBASIDIOMYCETES

Auricularia auricula-judae on dead *Sambucus nigra*

Tremella mesenterica on indet twig

W.Moodie & M.Poulton August 2014

Lower damp meadows (3954 from 5870) looking westwards toward the M5 motorway (M.Poulton)

Forge Farm Bird Survey Results (Part 1)

On 30th May 2014 "Sandnats" carried out a preliminary Biodiversity Survey of the area of the Sandwell Valley known as 'Forge Farm', previously in private ownership but now reverted to the Metropolitan Borough of Sandwell and as part of the Sandwell Valley LNR? (Subject to confirmation?)
As part of this Survey, Ann West and myself, Mike West were requested to conduct a survey of the bird life in the area covered by the farm boundaries.
The Sandnats Survey Group met at the farm at 11:00 hrs to conduct allotted tasks. The Group were given until 13:30 to carry out this preliminary survey, meeting back in the farmyard to report on their findings.
The Survey was conducted with reference to a 'sketch map' provided by Paul Smith, the M.B.S. Conservation Officer who also provided keys for access to the farm. All location references in this report are with reference to this map which you will find copied on **page 28** of the main report.
Ann and I, together with Tony Wood (who was conducting a Lepidoptera survey) began our work in the Farm Yard, moving on to the farmland to the left of the stream (4787) which runs across the 'Estate' from the farm buildings to the M5 Motorway boundary.

Report:- Farm buildings.
Birds recorded (as seen):-

Wren (WR) Troglodytes *troglodytes* 2 birds, m. song – very active.
Buzzard (BZ) Buteo *buteo* 1 circling above. Repeatedly seen throughout the survey.
Robin (R.) Erithacus *rubecula* 2/3 birds in song.
Blue Tit (BT) Parus *caeruleus* 1 pr. confirmed nesting in barn. Others around the farm buildings.
Barn Swallow (SL) Hirundo rustica Numerous around farm buildings. 2 pr. nesting in high barn and outbuildings.
Jackdaw (JD) Corvus *monedula* 12 + birds active over the farm and around the pastures.
Blackbird (B.) Turdus *merula* 3 m. song around the farm buildings. (Common around the area surveyed.)
Dunnock (D.) Prunella *modularis* 1 only (no doubt others in the farmyard)
Willow Warbler (WW) Phylloscopus *trochilus* 1 bird in song.
Woodpigeon (WP) Columba *palumbus* Common throughout the farm.
Magpie (MG) Pica *pica* Common throughout the farm.

(note : B.T.O. Code used below where referred to above. Common name used for additional species)

Area 5870 Higher pasture across the stream to left of the farm (Very Wet)
(SL) 5 birds hawking over the field.
(WP) As above.
(R.) 2+ birds – song from trees along the stream.
Carrion Crow (C.) Corvus *corone* 1 bird only
Lapwing (L.) Vanellus *vanellus* 1 pr.only. Moved away – no return.
(B.) 3 birds – song from mid field bushes and in trees along stream.

Area 5870 (continued)
Whitethroat (WH) Sylvia *communis* 2 birds 1 song.
Goldfinch (GO) Carduelis *carduelis* 2 birds 1- song from low bush.
(WW) 1 bird - song
(BT) pr. carrying food.
(WR) 2 birds- song from trees along stream.

Of additional note:- Footprints of Grey Heron seen in mud along side of stream near farm
Black-headed and Lesser Black-backed Gulls flying over.
Fox along stream side. TW. Caught Yellow Shell moth.

Area 3954

(R.) 1 bird - song.
(WP) as above.
(MG) as above
Chiffchaff (CC) 2 birds - song
(C.) pr. feeding on ground.
(WR) 2 birds - song
(JD) 3 birds -flying over
(BT) 5 birds - in willows along stream
Great spotted woodpecker (GS) pair along trees at stream side.
(B.) 3 birds, song and territorial chasing.
Blackcap (BC) 2 birds song.
Chaffinch (CH) 1 bird- song and call
Song Thrush (ST) 1 bird - song.
Jay (J.) pr. collecting food from ground.

Of additional note:- Hare (bottom right of field),

Area 2646

(BT) pr. in willows alongside stream.
(R) 2 birds - song
(WR) 1 bird – song
(CH) 2 birds – 1 song, 1-call
Treecreeper (TC) Certhia *familiaris* **pair mating!**

Area 1543

(WH) song from alongside Motorway Embankment
(WP) 5 birds (as above)
(ST) 1 bird – song
(B.) 3 birds – song

As time allowed for this stage of the Survey was over and conditions underfoot were very wet and unstable in places making progress difficult, we returned to the farmyard where the other members of the Survey party had already gathered. Discussion agreed that the exercise had provided a good initial idea of the importance of the area covered by Forge Farm and that it had been proved that this farmland needed a further visit to complete the Survey.
A total of 23 bird species were recorded, with more common species in good numbers, many of which should be recorded as Confirmed Breeding species.

M. West 01 June 2014

Tree Creeper (T. Parker)

Forge Farm Bird Survey Results (Part 2)

On 25th July 2014 Sandnats carried out a second Biodiversity Survey visit to Forge Farm in the Sandwell Valley to cover that area of the farmland not covered at the first visit due to time restraints. This Survey was carried out over the section of farmland to the right side of the stream 4787 (on map provided –**see page 28**) which contains the compartments 5075, 3572, 1865, 2094, 4190 and again, the farmyard.

Farm buildings.
Birds recorded (as seen):-

Barn Swallow (SL) Hirundo rustica 14 ad. 10 juv. mostly on the wing, around and over the farm buildings, some juv. birds resting on the barn roof.
Kestrel (K.) Falco *tinnunculus*
Goldfinch (GO) Carduelis *carduelis* 3 ad. 1 juv.
Magpie (MG) Pica *pica* Common throughout.
Blackbird (B.) Turdus *merula* 1 m.
Song Thrush (ST) Turdus philomelos 1 bird - song.

(note : B.T.O. Code used below where referred to above. Common name used for additional species)

Area 5075

(GO.) Huge flock feeding on thistle heads. Estimate 2 groups, 1 of 20+ birds, the second, 200+ including adult and young birds.
(SL) 2 ad. In flight – feeding.

Area 3572

Wren (WR) Troglodytes *troglodyte*s 3 birds 1m.song.

Area 1865

Carrion Crow (C.) Corvus *corone* single bird.

Area 2094

Green Woodpecker (G.) Picus *viridis* single bird – calling in flight.

Area 4190

(SL) Single bird.
(C) 1 pair.

Tony Wood's list of Butterflies & day-flying moths seen during the surveys.

Meadow Brown. *Maniola jurtina*. 5.
Large White. *Pieris brassicae* 15.
Green-veined White. *Pieris napi* 2.
Painted Lady. *Cynthia cardui* 1.
Peacock. *Inachis io* 4.
Speckled Wood *Pararge aegeria* 1.
Gatekeeper *Pyronia tithonus* 2.
Small Tortoiseshell *Aglais urticae* 4.
Common Blue *Polyommantus icarus* 1.
Burnet moths, *Zygaena sp.* Numerous
Latticed Heath *Semiothisa clathrata.* 2.
Yellow Shell *Camptogramma bilineata.* 1.
Cinnabar *Tyria jacobaeae.* Numerous, + caterpillars.
Burnet Companion *Euclidia glyphica.* 2.
Silver Y *Autographa gamma.* 3.
Shaded Broad- bar *Scotopteryx chenopodiata* 1.

General observations and comment.

Our second visit to this most interesting farmland (generally lately, much undisturbed) is a habitat with many features which support a wide variety of flora and fauna of which, the stream running centrally through the site, and the small stand of mature trees between Area's 1865 and 2094 are of great interest and provide habitat for many species. Due to the time between the first visit and the second visit, the vegetation had grown considerably, and the breeding period for many birds had passed, though the number of juvenile birds recorded showed that this farm had provided all that was needed for towards a good breeding season. The stream running through the farm, the trees and vegetation along its banks is of great importance to the birds and animals on the farm and any 'maintenance' along the stream should be kept to an absolute minimum. If possible, old fallen trees across and in the stream should be removed only to reduce blockages and allow good flow of the water as these, mostly rotted trunks provide good breeding territory for many species of invertebrates. It would be ideal if a boundary of no less that 4 – 5 meters on the north western side of the stream be left un-cultivated and that any work considered on the opposite side, hedge cutting etc. leave good cover for the smaller birds. The ground on the left side of the farmland holds some small trees and shrubs many standing individually, giving good cover and nesting sites for finches and buntings. It would be advantageous if some of these low bushes and trees could be left in situ, especially those growing on the side of the drop down to the lower ground on the left.

Finally, the writer has found the survey of this site of great interest and feels that, in consideration with the results of other surveys conducted at the same time covering other aspects of the biodiversity of the farm, the work under consideration to improve the financial viability of the farm, can be done whilst generally maintaining the considerable site biodiversity.

Mike West (SANDNATS) 5th August 2014

View from the bank of 5870 looking East towards Forge Lane (M.Poulton)

Forge Farm Mammal Report

A.J.Purcell & Piotr Koryl

The following provisional list is drawn up with the help of Piotr Koryl (Landcare) who kindly brought camera equipment and bat detectors and, together with A. Purcell, confirmed the presence of the three bats mentioned in the report. Both considered further bat and small mammal monitoring desirable.

The other mammals mentioned on the list are common and would be expected on the farm- the striking exception being the discovery of a magnificent Hare on the marshy grassland (see notional habitat area below). Mentioned in the Ornithology Report (M. West), this animal has not been recorded in this side of the Valley for many years and it is possible that this large stretch of unfrequented grassland has been one of the few remaining areas of suitable habitat available to it on the western side of the Sandwell Valley.

Given the B.A.P. status of this animal, we have to respect its presence and currently assume that a breeding population may be present. It would be appropriate if hedge contract workers and the Farm Manager could liaise with A. Purcell (Mammal Recorder-SANDNATS) to agree guidelines with regard to conservation of Hare in the damp meadow habitat where it is currently to be found . The mammals found are listed at the foot of the page.

MAMMALIA (Mammals)

ORDER: CHIROPTERA (Bats)

Nyctalus noctula	Noctule.	Farm Buildings PK/AJP
Pipistrellus pipistrellus	Pipistrelle. (common)	Farm Buildings PK/AJP
Pipistrellus pipistrellus	Pipistrelle. (Soprano)	Farm Buildings PK/AJP

ORDER: LAGOMORPHA (Hares & rabbits)

Oryctolagus cuniculus	Rabbit.	M5 Wood (droppings) MGB
Lepus europeaus	**Hare**	**Staffordshire Biodiversity action plan MW/AJP**

ORDER: RODENTIA (Rodents)

Microtus agrestis	Field vole.	Farm area AJP
Rattus norvegicus	Brown rat.	Farm Buildings MGB
Scirius carolinensis	Grey squirrel.	Farm garden & scrub MGB

ORDER: CARNIVORA (Carnivores)

Vulpes vulpes	Red Fox.	Both adult & cub sightings AJP

Forge Farm Light Trapping Evening for Lepidoptera. August 3rd 2014

R. Orton & M. Bloxham

Introduction

The purpose of the Forge Farm preliminary survey has been explained elsewhere, but the survey team, having already completed short surveys on birds and the Flora of the site, felt that some additional assessments of invertebrates would be informative for managers. To that end as a part of the programme they planned this moth trapping event. As the nocturnal setting was also appropriate for a bat survey, steps were taken to carry out a brief assessment of their presence on site at the same time. Those results are reported elsewhere.

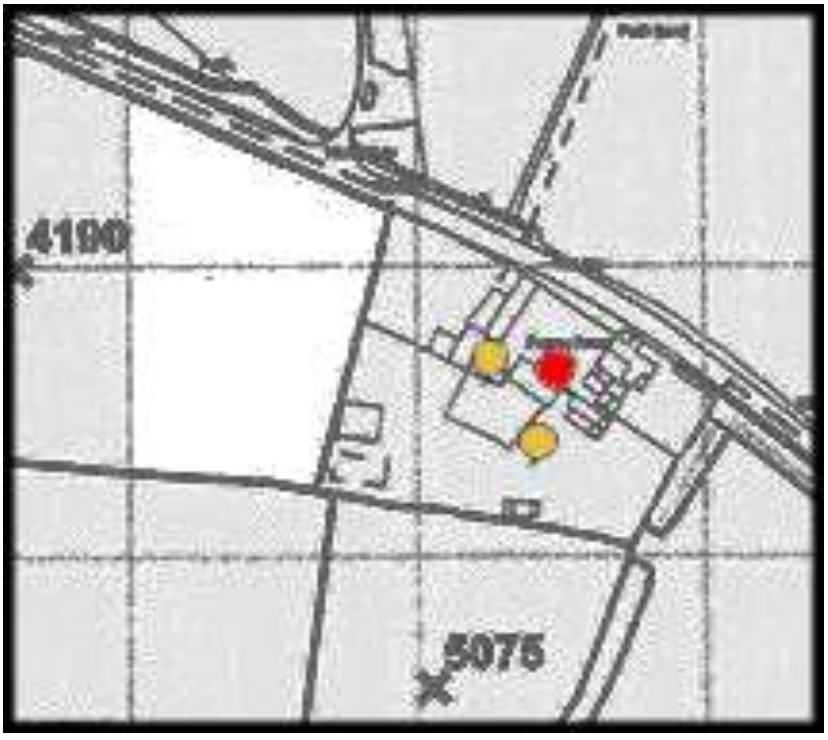
The Survey team

M. Bloxham,, S. Bucknall (visiting Water Biologist), (Piotr Koryl (visiting Bat specialist), R. Orton,, A.J. Purcell (bats & Photography), A.& M. West, A. Wood.

Methods

The traps and their location

Three traps were used, These were 2 Skinner Traps (125W MV) and a Lamp and sheet setup on a table. The plan gives the locations.



Duration and conditions

The session started at 8.45 pm and continued until 11.45 pm. There was a slight breeze and a clear sky, but hazy atmospheric conditions prevailed, ensuring that extraneous light intrusion was reduced. The temperature (10°C) was rather lower than that on preceding nights.

Notes

Traps were left to run continuously with occasional inspection to ensure that all was running normally and harm to moths in the catch was minimal. M. West and A. Wood regularly patrolled to check the generator, capture any insects flying freely round the traps and ensure the smooth progress of the operation.

Field identification of larger moths took place at the 'Lamp and Sheet' table wherever possible during the session. A. West and R. Orton presided over this.

M. Bloxham collected micro-moths and in company with R. Orton, examined the catch. Those which could not be confidently named were taken for subsequent microscopic examination by M. Bloxham. Some voucher specimens were retained.

At the end of the evening all traps were emptied and the captured moths were released on site, with the exception of a few larger moths which were retained for later release following further inspection elsewhere. *In this context, it is generally considered permissible to release a species in any place if it is known that it regularly occurs in that release locality. If there is any doubt, the species should be returned to the actual place where it was captured.*

The site was checked to see that it had been returned to its previous condition. Safety tape put down to mark off a hazardous area, was removed.

Discussion

In all, fifty-seven species of moth were recorded. Since trapping has been carried out once and in one location only, these results will greatly under-estimate the species of moth the farm supports.

Many of the species caught would be regarded as common and ubiquitous in the West Midlands. However, there were exceptions, with four species being recorded in Staffordshire for the first time in the last twenty years and one species, (*Eucosma pupillana)* new to Sandwell Valley.

All though many of the moths are generalists, having polyphagus caterpillars capable of living on a wide variety of plants, some are restricted to plants associated with waste ground or regarded as agricultural weeds. For example Wormwood is the food plant for the Bordered Pug and the afore-mentioned *Eucosma pupillana* and *Cochylis atricapitana* (about 20 records from Staffordshire), feeds on ragwort. Amongst other important food plants are: Nettles, dock, bedstraw, clover, thistles and willowherbs.. The hawthorn hedgerows and willow trees are another important food source and moths such as marbled beauty and the various footmen have caterpillars which feed on lichens growing on old timber.

The importance of old established hedgerows and standing timber and the need for space for agricultural weeds and waste ground vegetation should be born in mind when future management is planned.

Footnote

Readers are reminded that the Ornithology Report (A. & M. West & Tony Wood) includes a list of 9 butterflies and 7 day- flying moths they observed whilst gathering their other information. The list of moths found at light concludes this report.

Table of Moths Found

The table below is an abbreviated version of the one submitted to Mapmate. There is insufficient space to include all data found in the original, so if readers wish to inspect the entire content, they should contact Ann and Mike West.

code	Taxon	Vernacular	Comment
14	*Hepialus humuli*	Ghost Moth	
428	*Yponomeuta rorrella*	a micro-moth	Not recorded in Staffordshire before 2011; this will be the fourth record; possibly overlooked as food plant (willow), is very abundant.
642	*Batia unitella*	a micro-moth	
647	*Hofmannophila pseudospretella*	a micro-moth	
658	*Carcina quercana*	a micro-moth	
789	*Bryotropha domestica*	a micro-moth	
873	*Blastobasis adustella*	a micro-moth	
937	*Agapeta hamana*	a micro-moth	
966	*Cochylis atricapitana*	a micro-moth	First recorded in Staffordshire on 1996 and only 20 records since then; mat be overlooked as food plant is ragwort.
994	*Clepsis consimilana*	a micro-moth	
998	*Epiphyas postvittana*	Light Brown Apple Moth	
1169	*Gypsonoma dealbana*	a micro-moth	
1199	*Eucosma pupillana*	a micro-moth	New to the Valley lists and last recorded in Staffordshire in 2008. Feeds on wormwood.
1260	*Cydia splendana*	a micro-moth	
1293	*Chrysoteuchia culmella*	Garden Grass-veneer	
1344	*Eudonia mercurella*	a pyralid moth	
1354	*Cataclysta lemnata*	Small China-mark	
1405	*Pleuroptya ruralis*	Mother of Pearl	
1439	*Trachycera advenella*	a pyralid moth	
1682	*Timandra comae*	Blood-vein	
1708	*Idaea dimidiata*	Single-dotted Wave	
1713	*Idaea aversata*	Riband Wave	
1713	*Idaea aversata ab. remutata*	Riband Wave [non-banded form]	
1738	*Epirrhoe alternata*	Common Carpet	
1742	*Camptogramma bilineata*	Yellow Shell	
1759	*Ecliptopera silaceata*	Small Phoenix	
1834	*Eupithecia vulgate*	Common Pug	Probably this species
1839	*Eupithecia succenturiata*	Bordered Pug	
1894	*Chiasmia clathrata*	Latticed Heath	
1914	*Ennomos fuscantaria*	Dusky Thorn	
1937	*Peribatodes rhomboidaria*	Willow Beauty	
2044	*Eilema griseola*	Dingy Footman	First recorded in Staffordshire in 2004
2049	*Eilema depressa*	Buff Footman	
2050	*Eilema lurideola*	Common Footman	
2064	*Phragmatobia fuliginosa*	Ruby Tiger	
2089	*Agrotis exclamationis*	Heart and Dart	
2092	*Agrotis puta*	Shuttle-shaped Dart	
2098	*Axylia putris*	Flame	
2102	*Ochropleura plecta*	Flame Shoulder	
2107	*Noctua pronuba*	Large Yellow Underwing	
2109	*Noctua comes*	Lesser Yellow Underwing	

2110	*Noctua fimbriata*	Broad-bordered Yellow Underwing	
2111	*Noctua janthe*	Lesser Broad-bordered Yellow Underwing	
2126	*Xestia c-nigrum*	Setaceous Hebrew Character	
2134	*Xestia xanthographa*	Square-spot Rustic	
2198	*Mythimna impura*	Smoky Wainscot	
2262	*Agrochola circellaris*	Brick	
2278	*Acronicta megacephala*	Poplar Grey	
2293	*Cryphia domestica*	Marbled Beauty	
2303	*Thalpophila matura*	Straw Underwing	
2306	*Phlogophora meticulosa*	Angle Shades	
2321	*Apamea monoglypha*	Dark Arches	
	Oligia strigilis agg.	Marbled Minor agg.	
	Mesapamea secalis agg.	Common Rustic agg.	
2343	*Mesapamea secalis*	Common Rustic	
2449	*Abrostola triplasia*	Dark Spectacle	
2474	*Rivula sericealis*	Straw Dot	

Ref: Staffordshire Ecological record database; http://www.staffs-ecology.org.uk/html2010/index.php5?title=Search_the_Atlas&atlasid=X

Eucosma pupillana – a micromoth with wormwood as the larval foodplant (first Valley record).

Preliminary Entomological report on Forge Farm (general invertebrates)

Mike Bloxham and Tony Wood

Introduction

Sandwell Valley Naturalists' Club received an invitation to carry out this survey in May 2014, because funding was being sought for management of key features (notably hedges and associated space) on the derelict farm and the work was due to start in September, pending receipt of the appropriate grant.

Invertebrate Survey May 30th 2014 (Morning: 1100 - 1300hrs)

weather cloudy with some sun after heavy rain (T circa 20C).

1. Butterflies and day-flying moths

A & M. West (together with Tony Wood) were active in this general area on this visit and their report carries records of 9 butterflies and 7 day- flying moths they observed on site.

2. Smaller and more specialised invertebrates

Target areas: sweeping was carried out for a short period (15 minutes) in a small area of tall herb adjoining the farm buildings and for a longer period (30 minutes) where the areas 2646 and 3954 met this central stream (map below). Moving through dense wet tangled vegetation with sodden conditions underfoot -and in an area where no tracks existed, proved to be a very time consuming process, so no standardised sweeping regime was possible.

Full use of the sweep net difficult, because of the condition of the vegetation previously mentioned. So survey was restricted to netting from extreme tips of plants and flowers. As a consequence only a very general impression of the more specialised invertebrate potential of the area could be ascertained.

Invertebrate Survey July 25th 2014 (Morning: 1100 - 1300hrs)

This Survey was carried out on a very hot day over the section of farmland on rising ground to the northern side of the central stream which contains the compartments 5075, 3572, 1865, 2094, 4190.

The survey party made a clockwise circuit of the compartments starting in 5075 and ending at 4190 which received little attention because of health and safety considerations (cows with calves).

This component of the survey saw M. Bloxham paying closer attention to the older trees on site. Crack Willows along the stream showed plenty of evidence of tenure by insects (predominantly beetles), borings of several different sizes being present in many of the trees. It was not possible to

discover precisely which species were involved on this occasion. The small deciduous woodland bordering the M5 had Oak and Ash with similar borings but it is highly likely that some different insects had taken up residence in these trees. Inspection of dead fragments and standing timber indicated the likelihood that *Sinodendron cylindricum* could be present on site.

In the central field areas, conditions were dry and diversity of species was reduced but evidence of considerable insect activity around cowpats was noted. These are probably centres of interest to magpies as many a good meal could be had scavenging around the pats at various stages of decomposition. The level of activity was such that it was considered a valuable ecological exercise to discover more. A brief preliminary survey was planned for a future date.

Amalgamated list of Species Recorded during the two visits

ORDER	FAMILY	SPECIES	VERNACULAR	ABUNDANCE
Plecoptera	Nemouridae	*Nemoura cinerea W*	a stonefly	many
Hemiptera	Tingidae	*Tingis cardui P*	Spear Thistle Lacebug	S (new SV. rec)
Coleoptera	Coccinellidae	*Coccinella septempunctata*	7-spot Ladybird	several
Coleoptera	Coccinellidae	*Harmonia axiridis*	Harlequin ladybird	1
Coleoptera	Chrysomelidae	*Plagiodera versicolora P*	a leaf beetle	1
Coleoptera	Curculionidae	*Mecinus pyraster P*	a weevil	frequent
Trichoptera	Limnephilidae	*Glyphotaelius pellucidus W*	a caddisfly	several
Trichoptera	Limnephilidae	*Limnephilus auricula W*	a caddisfly	many
Lepidoptera	Oecophoridae	*Esperia sulphurella P*	a micro-moth	1
Diptera	Tipulidae	*Nephrotoma appendiculata*	a cranefly	several
Diptera	Tipulidae	*Molophilus griseus*	a cranefly	several
Diptera	Tabanidae	*Haematopota pluvialis*	a horse fly	Abundant - July 25th
Diptera	Stratiomyidae	*Chloromyia formosa*	a soldier fly	several
Diptera	Empididae	*Rhamphomyia (P) barbata*	a dance fly	1
Diptera	Empididae	*Hilara curtisi W*	a dance fly	1 (new SV. rec)
Diptera	Empididae	*Hilara Maura W*	a dance fly	many
Diptera	Dolichopodidae	*Dolichopus plumipes W*	a dolichopodid fly	many
Diptera	Dolichopodidae	*Dolichopus ungulatus W*	a dolichopodid fly	many
Diptera	Dolichopodidae	*Argyra diaphana*	a dolichopodid fly	many
Diptera	Syrphidae	*Melanostoma mellinum*	a hoverfly	several
Diptera	Syrphidae	*Xanthogramma pedissequum*	a hoverfly	1
Diptera	Tephritidae	*Tephritis vespertina P*	a gall fly	several
Diptera	Micropezidae	*Calobata petronella*	a stilt fly	several
Diptera	Psilidae	*Psila obscuritarsis*	a fly	1
Diptera	Lauxaniidae	*Sapromyza halidayi*	a fly	several
Diptera	Sciomyzidae	*Pherbellia cinerella*	a snail-killing fly	1
Diptera	Anthomyiidae	*Hylemya variata*	a fly	1
Diptera	Scathophagidae	*Scathophaga stercoraria*	a dung fly	fewer than expected
Hymenoptera	Apidae	*Bombus lucorum*	White-tailed Bumble	many
Hymenoptera	Apidae	*Bombus terrestris*	Buff-tailed Bumble	infrequent
Hymenoptera	Apidae	*Bombus lapidarius*	Red Tailed Bumble	common
Hymenoptera	Apidae	*Bombus pascuorum*	Common Carder Bee	inferquent
Hymenoptera	Apidae	*Apis mellifera*	Honey Bee	Isolated individuals

Discussion

The visits were of relatively short duration, so only a limited amount of general information about invertebrates on site could be gained. For that reason many small and unfamiliar insects do not figure in the lists. Many hours of work would be needed to name them and their ecological importance would be uncertain in the wider assessment of site ecology here. Certain groups of obscure insects (e.g. Chironomid midges) were present in great numbers. Many of these insects provide a potentially abundant supply of food for various birds.

Wetland insects (W)

Many of these have aquatic or semi-aquatic larvae. Seven species from three different orders figure in the yield. *Nemoura cinerea* is one of the most common British stoneflies and was present in numbers in the stream area. The two Caddisflies discovered are also both extremely common insects. Of the remaining specialists, *Hilara curtisi* has previously been recorded solely from Sutton Park in Birmingham and Black Country.

Some Insects associated with plants (P)

True Bugs
Tingis cardui is associated with Spear Thistle. This is the first Valley record for this bug, It is quite a common insect but has not been found during the course of sweeping isolated plants elsewhere. It is probably thriving in this area where the food-plant is in high concentration and agricultural management disturbance has been a minor factor for some time.

Beetles (a weevil)
Mecinus pyraster is associated with Ribwort Plantain. It was frequent on the area adjoining the farmyard where some shorter vegetation could be swept along the track.

Moths
Esperia sulphurella (a micro-moth) is a recycler associated with dead or dying trees. It lives at the interface of bark and wood.

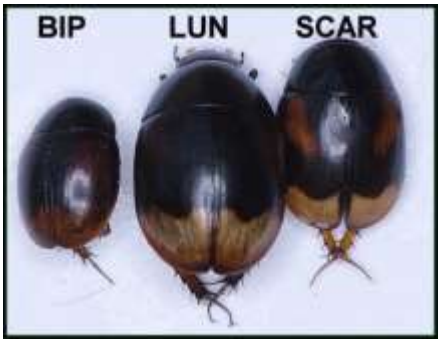
True Flies
Tephritis vespertina is a picture-winged fly associated with Hawk's beards (a species on site) and Common Cat's-ear.

The absence of key invertebrates
Of great ecological concern was the shortage of two winged flies associated with dung. In the past these were abundant and made their presence felt whenever one entered a field with farm stock. *Mesembrina meridiana* (a conspicuous shining black fly with yellow wing bases) was one of an assemblage that used to be abundant on pastures. Even the universally common yellow dung fly *Scathophaga stercoraria* was infrequent on the numerous pats on site. Although the layman may not notice such things they have ecological significance, and may well affect the traditional dung recycling processes.

Sandwell Valley Dung Beetles. Forge Farm Survey July 28th 2014

Introduction

In anticipation of land management work on the farm, permission was requested to carry out a short survey of the dung fauna associated with cows on the existing upper pastures. The grazing of cattle has been a regular feature for a number of years. Dung beetles can be present in great numbers. *Sphaeridium* species likely to be found in a Farm catch-*Sphaeridium bipustulatum*, *Sphaeridium lunatum* and *Sphaeridium scarabaeoides* are photographed below (from three specimens found on the Farm). They are often brightly marked, around 5 mm in length and in sufficient numbers on fresh dung to play a significant part in recycling.



Much larger are 'dumbledors' such as *Geotrupes spiniger* (photo below) approaching 2cm in body length. These have a significant effect on dung reduction often making extensive tunnels provisioned with dung in the earth beneath the pats.

Aphodius species are smaller (photo of *A. fimentarius* below) varying from 12 mm to 4 mm in size, but their numbers are often large enough to make them significant dung recyclers.

Cercyon species are very small and though often numerous, their effect on the rate of dung recycling is probably less significant.

Survey Details

Survey Team
Tony Wood and Mike Bloxham

Date of Survey
28th July 2014. Weather was sunny and hot. Time 1100- 1200 hrs.

Location of Survey (yellow area)

Equipment

2X 10 litre transparent plastic buckets, 1 plastic kitchen sieve, plastic bags, a trowel.

Method

Part 1

5 pats were collected from within the area shown. This was chosen because it was open grassland, facing south and therefore warm and sunny. The area was searched for suitable pats. The criteria were as follows:

- They had to have been deposited fairly recently (within 24 hours) so primary colonisation had taken place.
- This meant that by the time of survey, they had time to develop a hardening crust
- The crust had to be relatively easy to penetrate with the trowel. A hard crust could mean that some adult primary colonists had left the substrate.
- There had to be some evidence of beetle activity in the shape of holes in the crust.

Part 2

The collected pats were trowelled into one of the containers and the sample was taken down to the adjoining stream area where water was collected and separate quantities of the dung were mixed with water and stirred until diluted into a very sloppy liquid with beetles obviously coming to the surface and remaining there, supported by air under the wing cases/ surface tension etc.

- The sieve was used to separate the floating beetles and transfer the catch into plastic bags.
- The liquid sample remnants were discarded higher up the field away from the immediate vicinity of the stream.
- The sampled beetles were taken for examination under a high power binocular microscope.
- Vouchers were kept for each separate species for future comparison etc.
- Photographs of some target beetles were taken.

The beetles discovered can be compared with the Sandwell Dung Beetles previously recorded.

SV Dung Beetles (1980's) Pylon paddocks. Horse dung		**Forge Farm (July 2014) yellow area -Cow dung**
Cercyon impressus	a small dung beetle	present (numerous)
Cercyon haemorrhoidalis	a small dung beetle	
Cercyon melanocephalus	a small dung beetle	present (2)
Cercyon pygmaeus	a small dung beetle	present (new) several
Cercyon quisquilius	a small dung beetle	
Cercyon unipunctatus	a small dung beetle	
Sphaeridium bipustulatum	Hydrophilid dung beetle	Present 7
Sphaeridium lunatum	Hydrophilid dung beetle	Present 26
Sphaeridium scarabaeoides	Hydrophilid dung beetle	Present 11
Hister unicolor	Predatory dung beetle	
Peranus bimaculatus	Predatory dung beetle	
Geotrupes spiniger	a dumbledor	
Geotrupes stercorarius	Dor Beetle	
Aphodius ater	a dung beetle	
Aphodius conspurcatus	a dung beetle	
Aphodius contaminatus	a dung beetle	
Aphodius equestris	a dung beetle	
Aphodius fimetarius	a dung beetle	present 1
Aphodius foetens	a dung beetle	
Aphodius fossor	a dung beetle	Present 1
Aphodius haemorrhoidalis	a dung beetle	Present 1
Aphodius merdarius	a dung beetle	
Aphodius prodromus	a dung beetle	
Aphodius rufipes	a dung beetle	Present 21
Aphodius rufus	a dung beetle	Present 1
Aphodius sphacelatus	a dung beetle	
Ontholestes murinus	a rove beetle	

Discussion

A new species was added to the Valley lists and the 11 species recorded are more or less in line with expectations for the July/ August interface. Seasonality is a feature of many species. A late summer /autumn survey will reveal additional species.

Examination of pats in different states was not done here. Studies on these will uncover more denizens. For instance, removal of drier pats will often reveal the burrows of the larger chafers.

Use of white trays on which drier dung is placed will often enable capture of active coprophiles (insects favouring dung) from other families e.g. rove beetles (staphilinids).

As may be seen the methodology used here is probably adequate for a snap survey, but certainly not for a systematic one. If that is undertaken, expert guidance will need to be sought so properly focussed work can provides a better picture of beetle activity on site and a much more comprehensive checklist of beetles active on the farm.

It can be seen that the types of dung sampled vary from earlier work to the present (cow/ horse). Whilst this is not a decisive factor for many dung beetles, there are some specialists preferring a single source of dung (even sheep dung).This gives interested students a chance to carry out some comparative studies in the Sandwell Valley at large.

In recent times concern has been expressed over some of the compounds used in veterinary practice to treat, control or prevent disease in farm stock. There has been some evidence suggesting that residues may have harmful effects on the invertebrate fauna traditionally associated with dung. Information on these insects may be of interest to farm managers to indicate the 'health' of the recycling fauna (are pats & horse dung vanishing rapidly or do they remain in dried state for long periods of time and accumulate?). As there has been recent national research work in this area to establish some facts, it may be valuable if the Country Park is able to supply some data should enquiries be made.

Work of this sort is absolutely ideal for an enthusiastic Country Park Ranger wishing to develop his ecological and invertebrate knowledge for the purpose of informing management and enhancing future career prospects in a world where invertebrate studies are likely to be increasingly relevant in throwing light on all sorts of trends and practices. Sandwell Valley Naturalists are available to give initial assistance in a number of necessary skills.

Essential reading (and entertaining)

Skidmore,P. (1991) **Insects of the British Cow-Dung Community.** *Field Studies Council Occasional publication* No.21

Additional species trapped at light on August 3rd 2014

The moth trapping event is described in the separate report (R. Orton & M. Bloxham). It does not refer to anything caught other than moths. The other insects were of some interest. They included an additional caddisfly *Limnephilus lunatus* (probably originating from the stream), a brown lacewing *Micromus variegatus* and three parasitic nocturnal ichneumons targeting moths (*Ophion pteridis*, *Enicospilus ramidulus* and Zele *chlorophthalmus*).

General Comments on ecological significance of Forge Farm Invertebrates discovered in the above reports.

The work uncovered only a very small number of the invertebrates likely to be found on this interesting site.

The results suggested the Farm contained some well- defined areas such as the central stream and its associated Crack Willows, which hosted distinctive and specialised insects. The fact that such areas of likely interest are so well defined will be useful to managers and should enable progress in conservation to be made without adversely impinging on normal good farm practice. Managers might like to embrace the idea that fields where cereal growing is to be undertaken should also have a marginal conservation strip. This is not new in the area- especially when a farm adjoins (or is a part of) a larger area of wildlife conservation such as a Country Park. A good example may be found at College Farm Walsall (adjacent to Park Limepits).

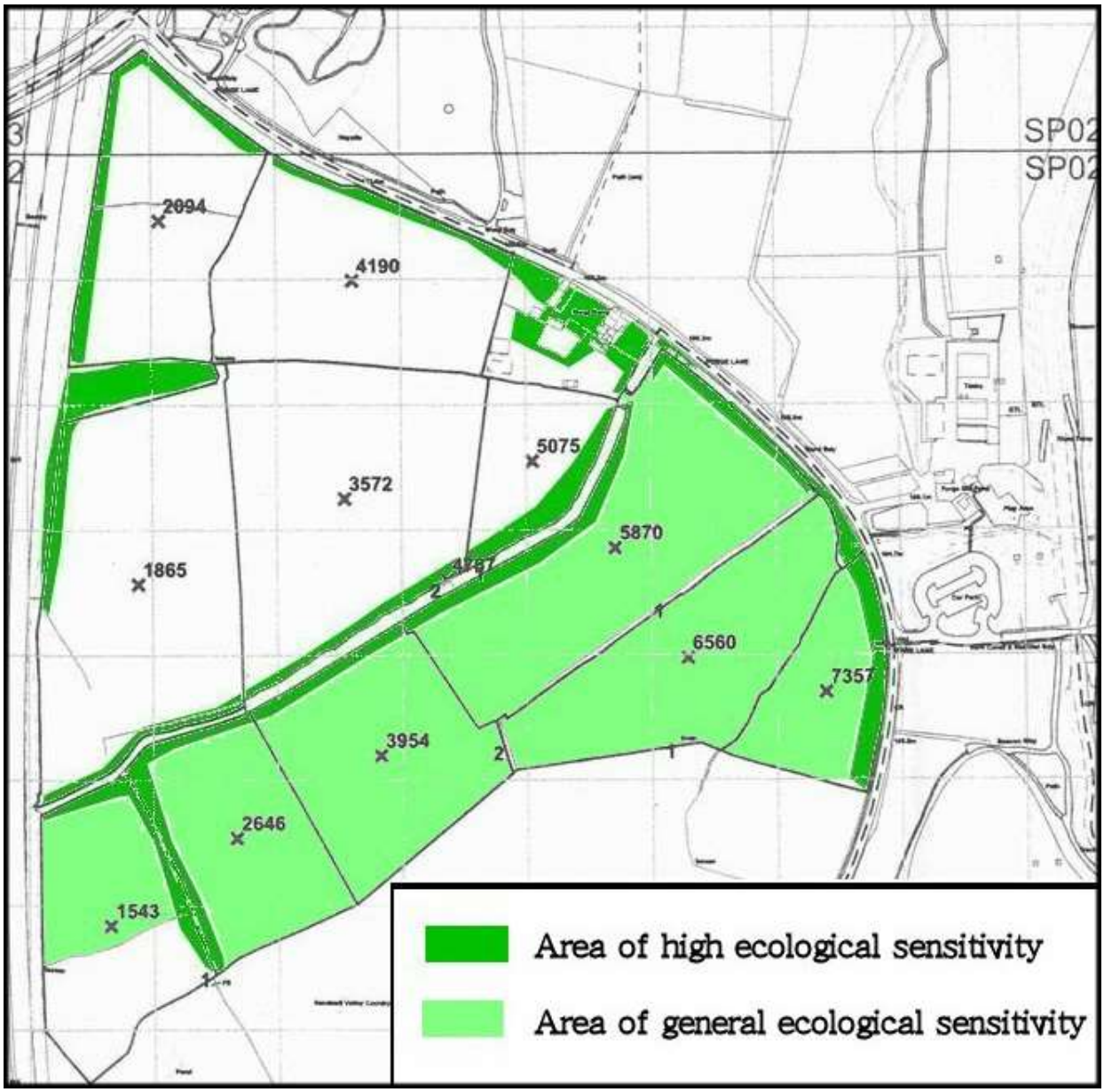
The components of the survey suggested that the Farm hosted an interesting and diverse invertebrate fauna and we will be much indebted to Sandwell Country Park Staff if they will permit some further ongoing survey to take place as refurbishment of the Farm proceeds. The survey failed completely to cover the very important confluence of the Jubilee Coal Tip/Swan Pool Stream with the East drain entering from beneath the M5 motorway at the junction of Parcels 1543 and 2646. The importance of this omission means that we would be most grateful if a water biologist was given permission to make a report on the Forge Farm stream systems in the near future.

M. Bloxham & A.J. Wood August 2014

Concluding comments and General Conservation Map

Thanks must be given to all who have contributed to the report and anyone who has facilitated work on site.. We have to remind ourselves that this is only the first step in becoming familiar with the ecology of Forge Farm and we therefore hope for a fruitful future liaison with Country Park staff so that unfinished work may be completed and further survey undertaken on this significant wildlife site.

The map below gives a general impression of areas we believe to have special conservation interest.



Sandwell Valley Naturalists' Survey Team (August 2014).

Site Reference Photography (part) by A. Purcell

He has taken a number of photos of the farm and the surrounding fields. Below are three examples.

Forge Farm outbuildings looking eastwards from 5075

Forge farmyard looking westwards from the road

Panorama of lower meadows (Jubilee tip on left & 5075 bank on right) from Forge Lane road gate.