

2010 Beetle Survey for
Greenham and Snelsmore
Commons

Lloyd Garvey, March 2011

Introduction

There are approximately 370,000 species of described beetles in the world to date, outnumbering all known species of plant. There are 6 or 7 described beetle species to every vertebrate (Harde K.W. A field guide in colour to Beetles). More than 4,000 species reside in the UK and they inhabit almost every terrestrial habitat except the oceans. Their activities can be broken down into the following types:-

Cleaners - Consume and bury dung, distribute seeds contained within dung, remove corpses helping to reduce flies and disease, eat rotting vegetation returning vital nutrients to the soil.

Hunters - Predate known pests such as aphids, caterpillars and other invertebrates.

Pollinators - Pollinate plants and trees.

Pests - Some beetles (particularly the larva) are known pests, such as Heather Beetles, Wire Worms, and Wood Worm.

Although residing in a diverse range of habitats and with numerous food sources almost all beetles have the following characteristics.

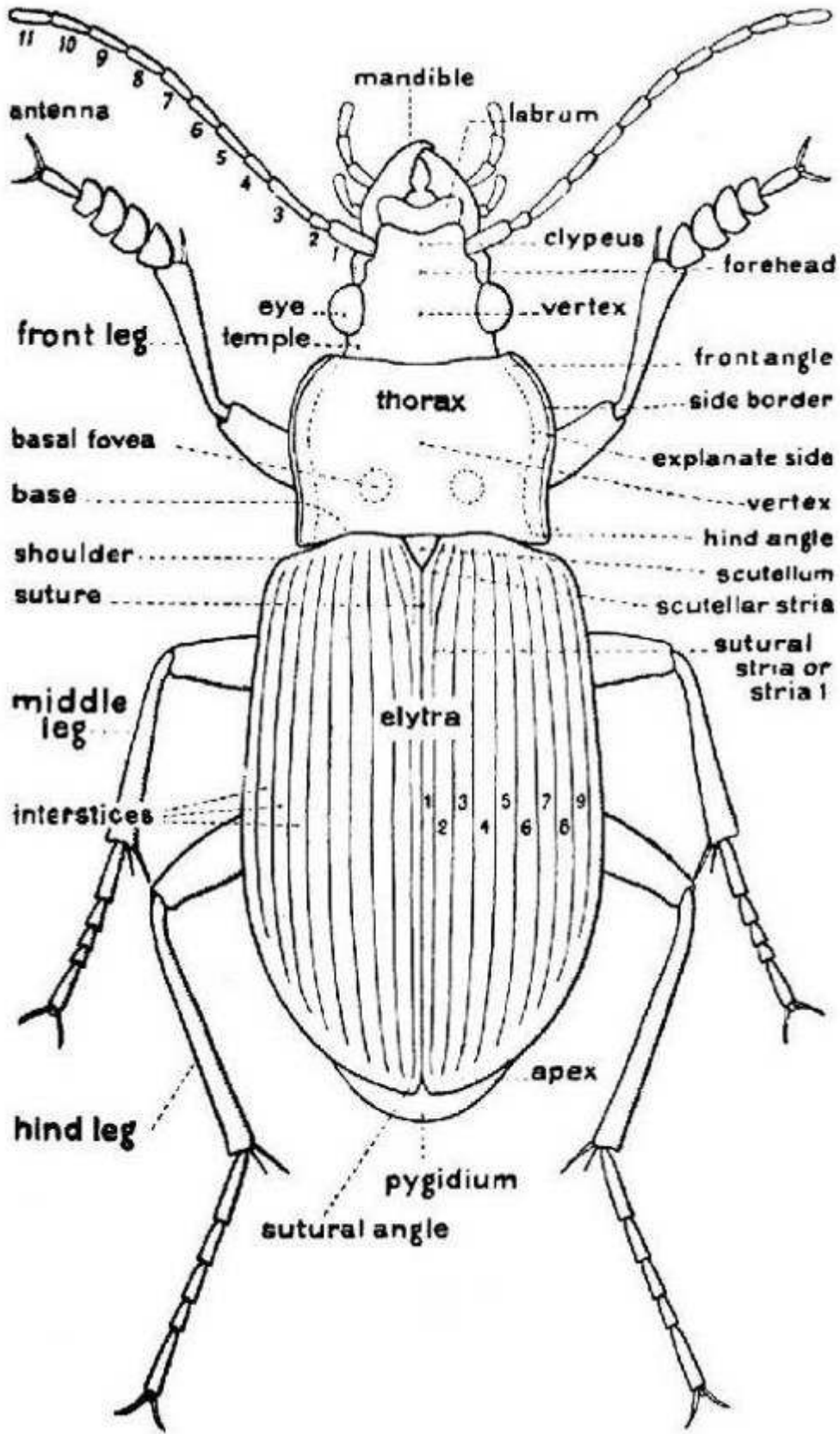
1. Hard wing cases (elytra) that cover the greater part of the body. These meet in the middle and leave a visible central line travelling down the body. The elytra are in fact the first set of wings which have become hardened to protect the second set (flight wings) which sits below.
2. All beetles have biting mouth parts (mandibles).

The diagram on the following page details the main parts of an example beetle.

The insect group that can be most easily confused with beetles are the family of true bugs (Hemiptera). These have wings that cross each other and they eat through a rostrum (a sort of straw like structure) which they insert into vegetation.

Beetles are of great benefit to the environment as they not only perform the functions stated above in breaking down vegetable matter, removing carcasses and animal faeces, consuming known pests such as aphids, but they themselves are very low in the food chain and provide a valuable food source to both mammals and birds.

Example Beetle



Greenham Common

Greenham Common is located in West Berkshire, just to the Southeast of Newbury



Greenham Common has a long history. What follows is an abridged version that hopefully gives a flavour of the events that have occurred there and lead to the unusual habitats that can now be found across the site.

It is from the Middle Ages onwards that the history of Greenham becomes better documented with associations with a monastery administered by the Knights Hospitaller, later confiscated by Henry VIII with abolishment of the Monasteries in 1540. It is fear of French invasions that the common begins use during the 18th and 19th century for training exercises by the military. During the First World War soldiers and tanks again used it for military exercises. In 1941 the Ministry of Defence (MOD) requisitioned it and an airfield was constructed on the site. The base gained international notoriety during the 1980's when 96 cruise missiles were housed there and a long period of protests occurred around the site lead by the women's peace camps that were created at the various base entrances. This culminated in 1983 by a 14-mile human chain that wrapped around the entire site.

The airbase was vacated by the United States Airforce (USASF) in 1992 and put up for sale by the MOD in 1993. During 1994 the MOD gave the Common back to the people of Newbury and English Nature designated part of the site as a Site of Special Scientific Interest (SSSI). Work began on removing the runways in 1995 (which were the longest in Europe) and the concrete and aggregate was used in the nearby construction of the Newbury by-pass. The year 2000 saw the official re-opening of the common to public use, and the following year grazing was re-introduced. Now approximately 100 cattle roam freely. Finally during 2007 a herd of Exmoor ponies were introduced, their welfare is constantly monitored and they number approximately a dozen.

There are a few factors in its recent history that have led to Greenham Common containing some unique and diverse habitats in very close proximity. The runways and taxiways that were removed have, over a period of time, leached alkaline into the soil. This has led to calcicole (chalk loving) and calcifuge (acid loving) flora growing side by side. A soil survey undertaken during 1998 concluded the following: -

'Sporadic field-testing of heathland and grassland topsoil's within the airbase showed that they often had pH values between 6 and 7. These slightly acidic to neutral values would be generally considered insufficiently acidic for calcifuge heathland communities and insufficiently alkaline for some of the more calcicole species present. This suggests that both plant community composition and soil PH are in a state of flux and that further changes in the balance between calcifugous and calcicolous species are likely. The direction of change is unknown.

These high pH conditions suggest considerable contamination of the heathland soils by calcareous materials, presumably from concrete used in airfield construction and possibly also from surface dust following recent concrete crushing operations. The conditions are far from ideal for heathland and it could be that calcifuge communities are in decline because of this. However, the picture is far from clear.' (Allen, R, 2000)

This has created habitats suitable for species that are associated with both acid heaths and chalk downlands only a few feet apart. The site is home to nearly a quarter of all UK plant species (<http://www.greenham-common-trust.co.uk/wildlifep.htm>).

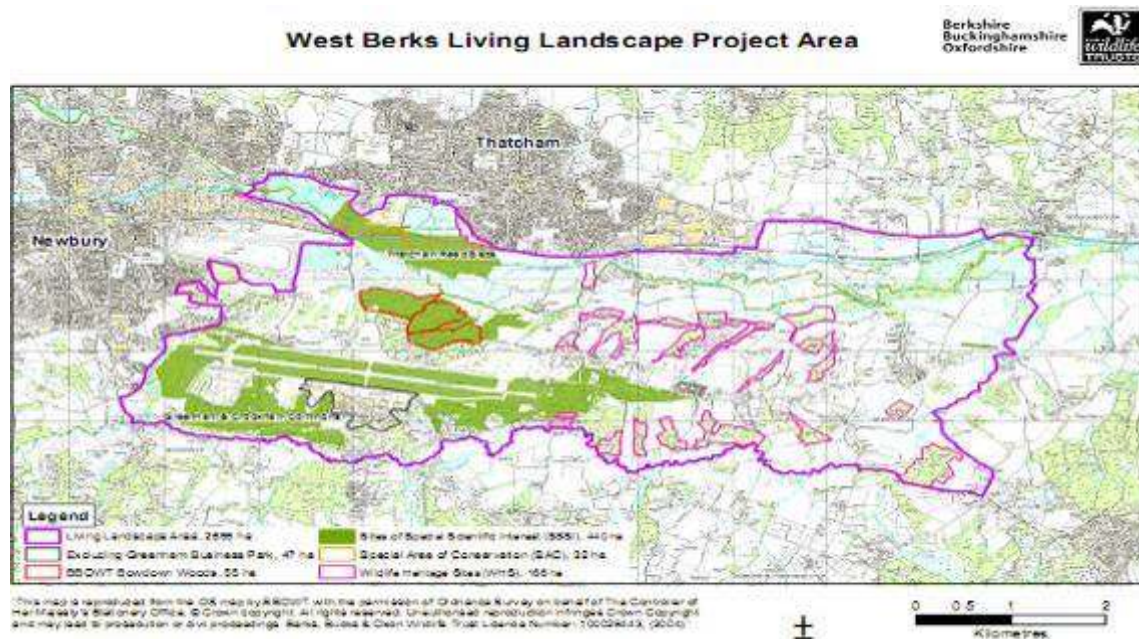
Once the concrete was removed this left huge gravelly tracts. These areas now show early stages of succession that would have naturally occurred at the end of the last ice age. This will give an interesting if somewhat accelerated view of the last 12,000 years since the glaciers melted. The areas that once lay within the runways and would have been heavily mown by the military (the distinctive lozenges as seen overleaf) have become the SSSI heathland.

Polluted areas were removed leaving large excavations that soon became a series of permanent and ephemeral ponds and undulations of varying depths. A series of woodlands and gullies can be found to the south of the site. Some of these woodlands are mentioned in early Norman maps (Peckmoor Copse, which was then called Peckmoor Wood).



(Greenham from the air)

The Common encompasses an area of approximately 414 hectares and is 5.5km east to west. In 2008 a landscape project began and a partnership formed between Berkshire Buckinghamshire, Oxfordshire Wildlife Trust (BBOWT) and West Berkshire Council. This has 3 reserves at its heart, Greenham Common, Bowdown Woods (a BBOWT reserve that borders the North side of Greenham Common), and Thatcham Reed Beds (a West Berkshire Council site that is to the Northeast of Bowdown and is also a SSSI and SAC). The West Berkshire Living Landscape is over 2,700 ha (27 Sq km) - a landscape which encompasses lowland heath, ancient woodland, reed beds, rivers and streams.



The Common is now home to numerous protected and Biodiversity Action Plan (BAP) listed species including, Adders, Grass Snake, Slow Worm, Common Lizard, Great Crested Newt, Dormouse, Badger, Small Blue Butterfly, Woodlark, Nightjar, Woodcock, Nightingale, and Barn Owl.

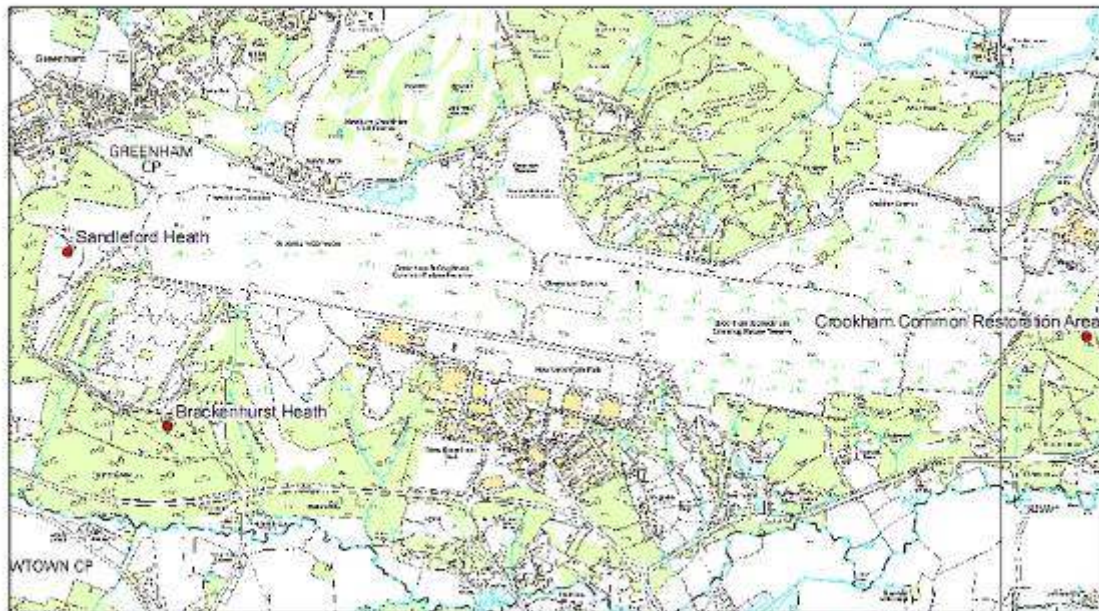
Methodology

As no previous Coleoptera surveys had been undertaken at Greenham Common there were no records of what species may be present. This survey is an initial study to provide information on the presence or absence of a species which could then assist in suitable habitat management.

Three areas of Greenham/Crookham were selected along with two locations at Snelsmore to act as a comparison as Snelsmore is a much older and more established location.

The locations selected were:-

Location Of Pitfall Traps For Invert Survey 2010



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Scale 1:16,000
0 250 500 1,000
Metres

10/02/2011

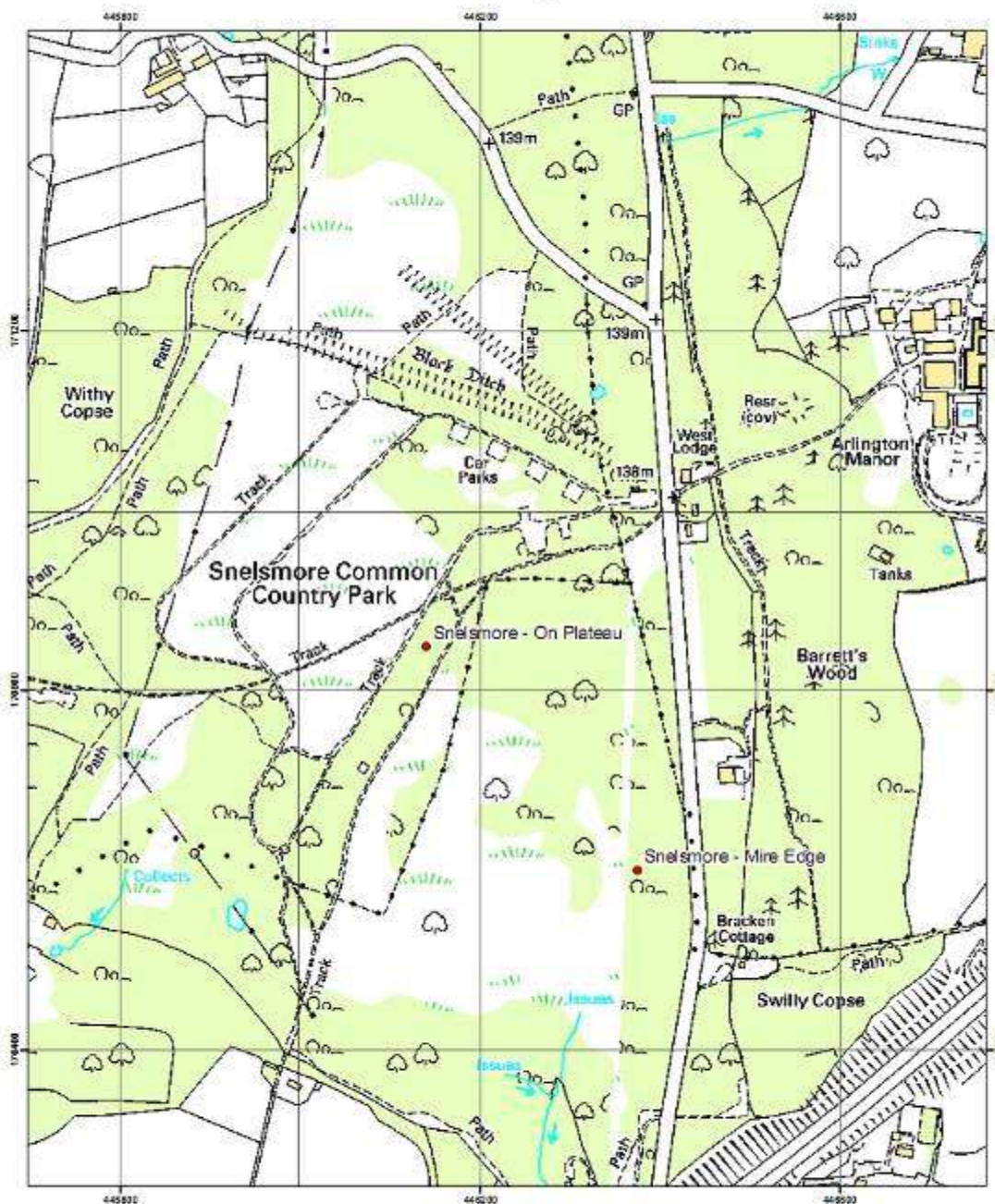
Greenham/Crookham - The area that will be included within the heathland restoration programme at location SU52339 64509

Greenham/Sandleford Heath - An area comprising of traditional heathland vegetation at SU48316 64843

Greenham/Brackenhurst Heath - An area comprising of traditional heathland vegetation at SU48710 n64157

Location of Pitfall Traps Invertebrate Survey 2010

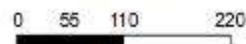
Berkshire
Buckinghamshire
Oxfordshire



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Scale 1:4,000



Metres
July 2010

Snelmore Common - Plateau amongst the heath SU46141 70848
- Mire edge. A wet heath SU46376 70599

A series of 5 pitfall traps were situated in each area for periods of 1 week each. Each trap was made up of 2 plastic half pint glasses with a top diameter of 7cm. A suitable hole was dug with a garden trowel and the 2 cups placed inside each other. Using 2 cups enables you, to empty the catch by removing the inner cup leaving the outer cup in the hole to prevent soil falling in.

The basic concept of pitfall trapping is to dig a jar or cup into the ground, level the soil surface flush with the rim of the jar/cup, and leave it for unwitting animals to fall into. Pitfalls may be left for a few weeks if filled with an inch or two of a suitable preservative (dilute propylene glycol antifreeze (as sold in motor parts shops, etc.) is the best). I ran dry pitfalls to catch live specimens enabling me to release unwanted specimens (you will get a lot of other insect species along with the occasional small mammal that would have been killed if the preserving agent was used) As all the locations to be trapped were open to the public and the possible negative public reaction to pots full of dead animals I thought it best to capture live insects.



The traps were laid in a pattern of the number 5 on a die with an approximate diameter of 2 metres



Each trap must either be flush or slightly below the surrounding surface. Even a 1mm lip will prevent even the most suicidal of beetles from falling in.

During the week I visited the traps several times to collect any beetles that may have fallen in. After the week the traps were removed and taken to a different location. This meant that each location was trapped for a total of 3 weeks. 1 week in May, another in July, and finally a week in September/October.

Throughout the whole periods other methods were also used to capture beetles. These included:-

1. Sweep netting - This involves using a sturdy net and sweeping it through vegetation. This method was not very successful and produced little samples as the sward height at Greenham is very low.
2. Tree/Shrub bashing - With this method a sheet is placed below a tree/shrub which is then bashed and any insects that fall onto the sheet are collected. This again produced very few results.
3. Hand searching/sieving - Hand searching through leaf litter under fallen tree branches, rotting timber, and sieving top soil, leaf litter onto a tray. This proved to be a successful method for collecting beetles.



Sieving leaf litter in Greenham/Aldenbridge Gulley.

Identification

Identification was undertaken by myself at Oxford University Natural History Museum using the following keys:-

A Practical Handbook of British Beetles - (Norman Joy 1932)

Click Beetles - Norman Joy's key modified by M. Telfer
(<http://markgtelfer.co.uk/beetles/elateridae-eucnemidae-and-throscidae/joys-keys-to-click-beetles/>)

Handbooks for the identification of British insects - Soldier Beetles and Glow-Worms
(MG Fitton 1997)

Ladybirds – (Michael Majerus and Peter Kearns 1989)

Handbooks for the identification of British insects - Tenebrionidae (MJD Brendell 1975)

The Carabidae (ground beetles) of Britain and Ireland - M. Luff 2007

A key to the families of British Beetles (DM Unwin 1988)

The Beetles were identified using an 80* microscope and difficult species were compared with the museum's collection.

The Locations

Greenham Common

Brackenhurst Heath - This area of Greenham Common is located on the South West corner of the common. The photographs below are taken from the location of the pitfall traps to give an idea of the habitat present. Ling, Gorse, and Silver Birch are the main plant species present. The average height of the vegetation in the surrounding area was 18cm.



Sandleford Heath - Sandleford Heath is located at the Western End of Greenham Common. The area contains very young Heather, some Gorse and Silver Birch. The average vegetation height was 11cm.



Crookham Restoration area - this is located at the Eastern end of Greenham and is the area designated to be restored to heath. At present the area is dominated by Silver Birch, Gorse, and moss. The vegetation height was not recorded as the habitat was not suitable to measure.



Snelsmore Common

Plateau - This is on top of Snelsmore Common. Snelsmore is a much more mature heath and the main plant species are Heather, Gorse, and Silver Birch. As it is much more mature the average height of vegetation is 50cm.



Mire edge - This located is along the Eastern side of Snelsmore. The vegetation comprises of Cross Leaved Heather, Silver Birch and grasses. The average height of vegetation was 32cm



Results

General observations

The summer of 2010 appeared to be a dry year, but the statistics prove otherwise. The Metrological office data from Bedfordshire show an average rainfall of 25.8 inches per year. During 2010 24.8 inches of rain fell however the months of March, April, May, June, and July were below average (in August 3 times the average fell). In the years prior to 2010, above average rain fall was recorded. The last dry year was 2005. Nevertheless most of the ponds at Greenham dried up. This would have an adverse effect on the population of all invertebrates on the common, especially in the drier areas on the main plateau. Most invertebrates are fairly mobile so will relocate to some of the wetter areas. As this is the first year of this study it is difficult to scientifically show these effects.

The average vegetation heights clearly show that all the heathland areas at Greenham are fairly young compared to Snelsmore Common and will hopefully improve with time.

Interesting species recorded:

Green Tiger Beetle

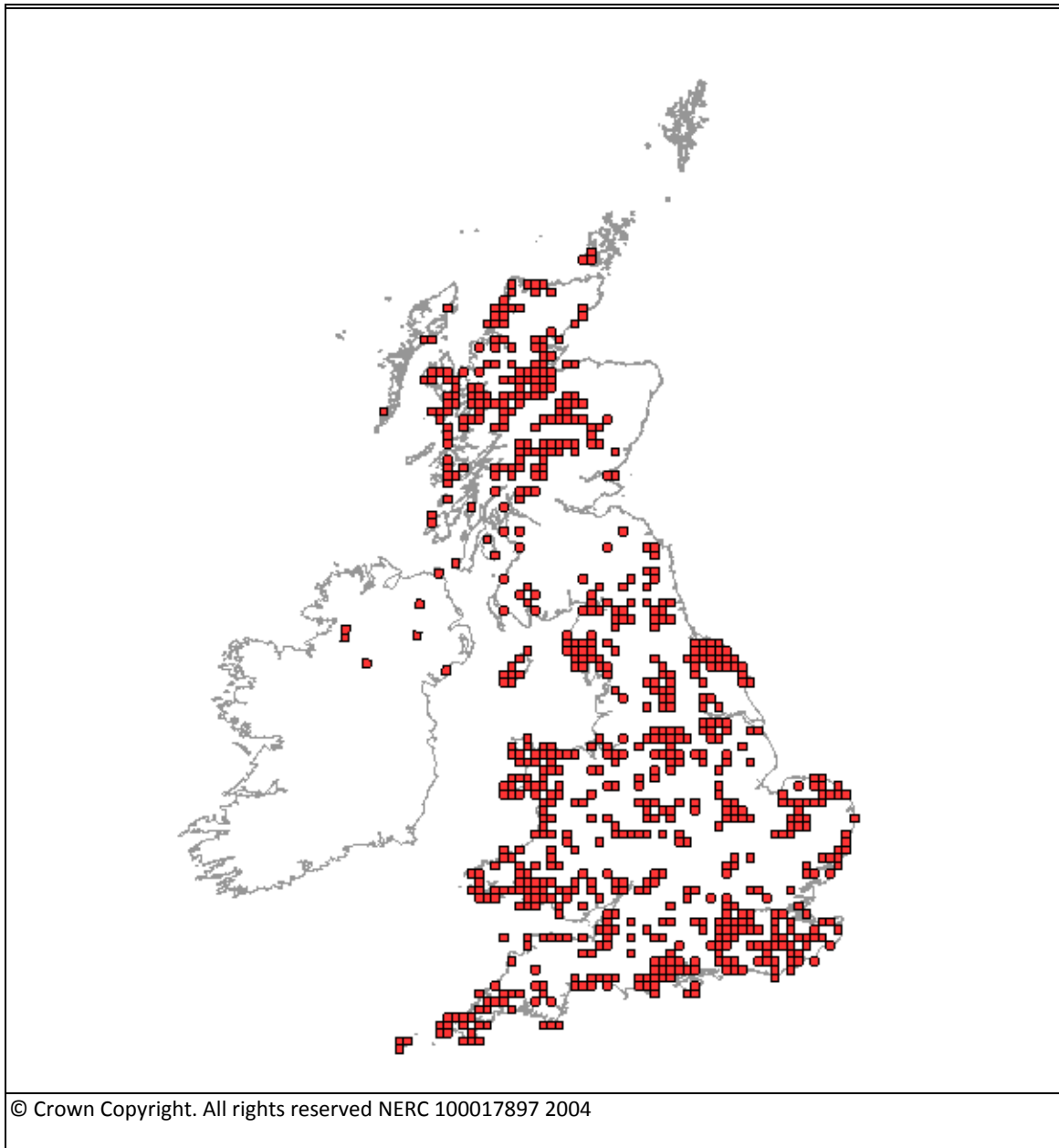
The most iconic of heathland species is abundant in most areas of the heathland at both Greenham, and Snelsmore, though at present appears to be absent from the Crookham restoration area. The species thrives in dry sandy environments and is very active during the day and is often seen running or flying across the paths in front of any pedestrian. The species is an avid hunter and chases and eats other invertebrates. It has a large set of jaws which make it an extremely good hunter. Its larva form is also an Invertebrate hunter. It digs small holes in sandy soils (often seen on paths) in which it hides waiting for an unsuspecting invertebrate to pass by, when it grabs the prey and drags it into its hole.




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10km squares with records for *Cicindela campestris* (Green Tiger Beetle) in Great Britain and Ireland

Includes the following taxa: *Common Tiger Beetle*, *Field Tiger Beetle* & *Green Tiger Beetle*.



10km square legend

 Present in 10km squares

Minotaur Beetle

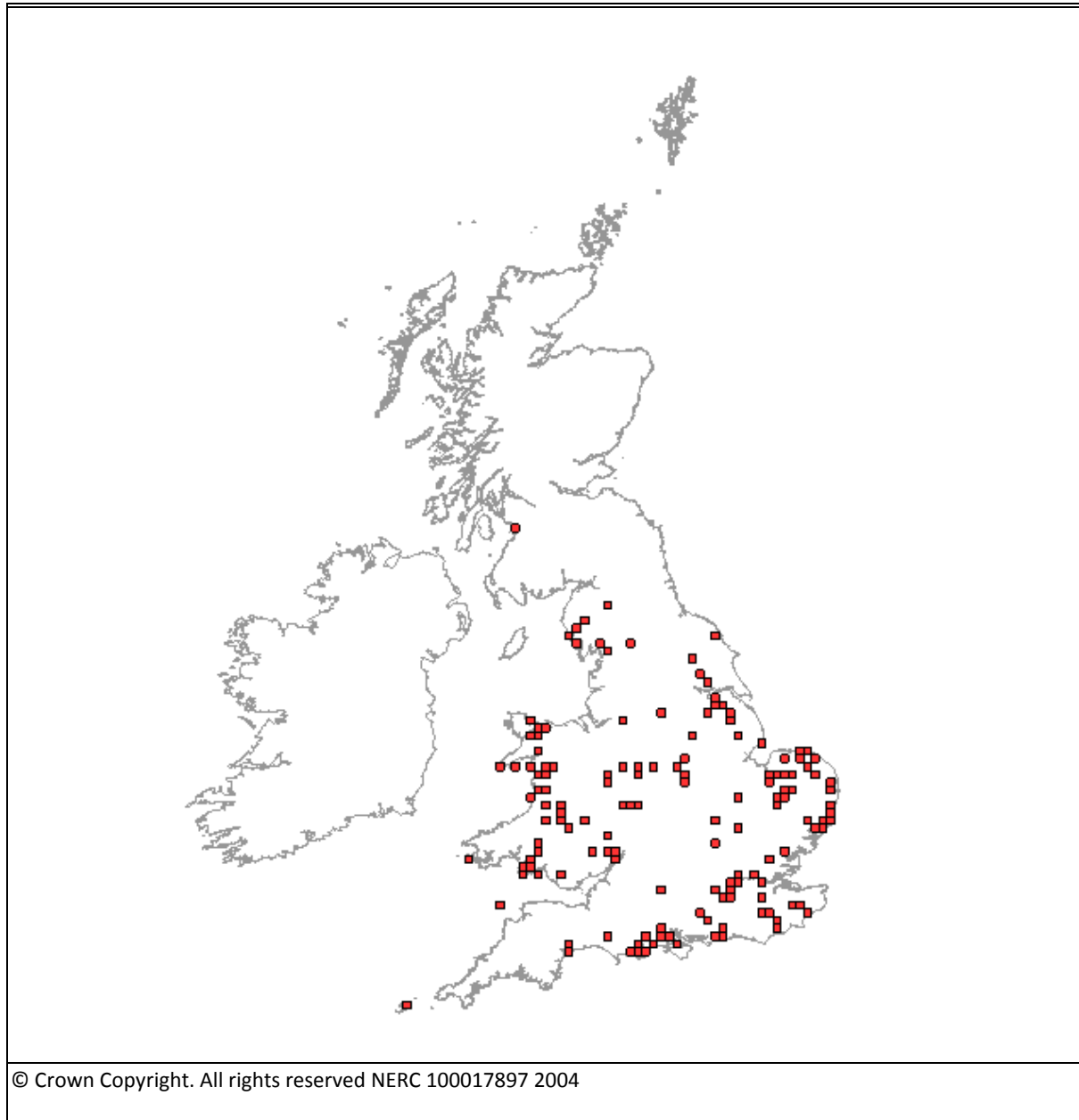
These are largest of the UK's dung beetle. They are unmistakable with its 3 long horns, these are used purely for fighting other males. They feed on Rabbit droppings. They dig tunnels up to 1.5m deep in which they carry the dung down, they do this by rolling the dung along using their two front legs. The eggs are laid at the bottom of the tunnel where when they hatch they feed on the dung.



© Malcolm Storey, 2005, www.bioimages.org.

10km squares with records for *Typhaeus typhoeus* in Great Britain and Ireland

Includes the following taxa: *Geotrupes vulgaris*, *Typhaeus pumilus*, *Typhaeus thyphoeus*, *Typhaeus vulgaris* & *Minotaur Beetle*.



10km square legend

■ Present in 10km squares

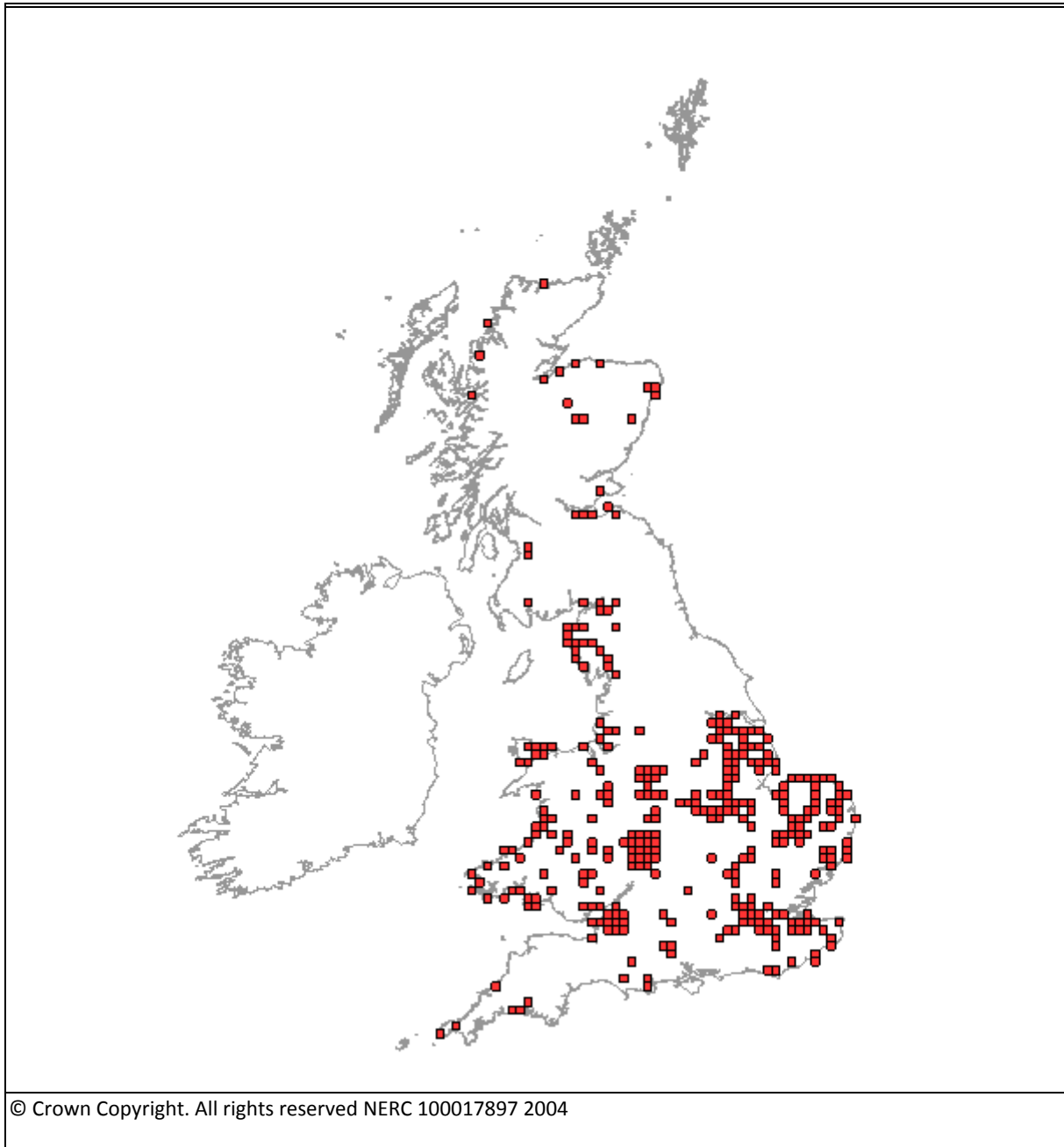
Devils Coach Horse

The Devils Coach Horse is a type of Rove beetle (Staphylindae) these are identified by the short wing cases (elytra) that leave a lot of the abdomen exposed. When threatened they open the jaws and raise the abdomen upwards (as seen below) in scorpion like fashion. In reality they have no sting but can release a foul smelling odour. They are avid predators hunting normally by night eating many invertebrates, as well as carrion.




10km squares with records for *Ocypus (Ocypus) olens* (Devil's Coach-horse) in Great Britain and Ireland

Includes the following taxa: *Cocktail* & *Devil's Coach-horse*.



10km square legend

 Present in 10km squares

Agonum sexpunctatum

This is a type of ground beetle (Carabidae) associated with wet ground on sandy soils on lowland heaths. It is quite a rare beetle as the records on the next page show. It is officially designated as notable A which means "Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in 30 or fewer 10km squares of the National Grid"

(<http://data.nbn.org.uk/directory/browseDesignation.jsp?designationKey=43>).

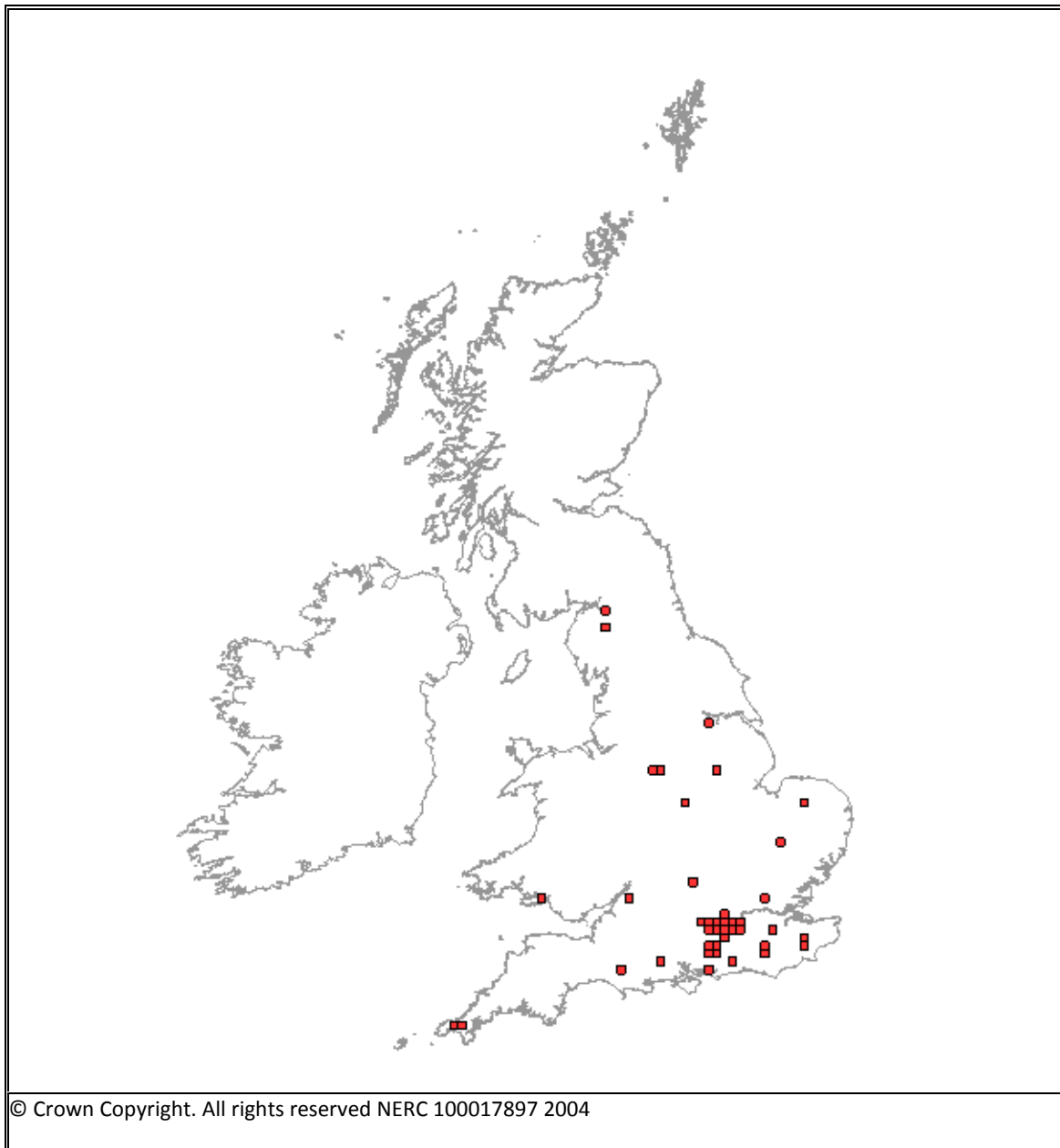
The record at Snelsmore was the first Berkshire record for this species since 1939.




©Keith Tomey 2010

10km squares with records for *Agonum (Agonum) sexpunctatum* in Great Britain and Ireland

Includes the following taxa: *Agonum sexpunctatum*.



10km square legend

 Present in 10km squares

Heather Beetle

This native little brown beetle hibernates throughout the winter below the surface. It lays its eggs between April and June and the larva can be found between June and August. It's the larval stage that requires damp areas particularly mosses. Though it can be prolific it is often hard to find as it has the habit of immediately falling to the ground if disturbed. They are very poor fliers and they are distributed by the wind.

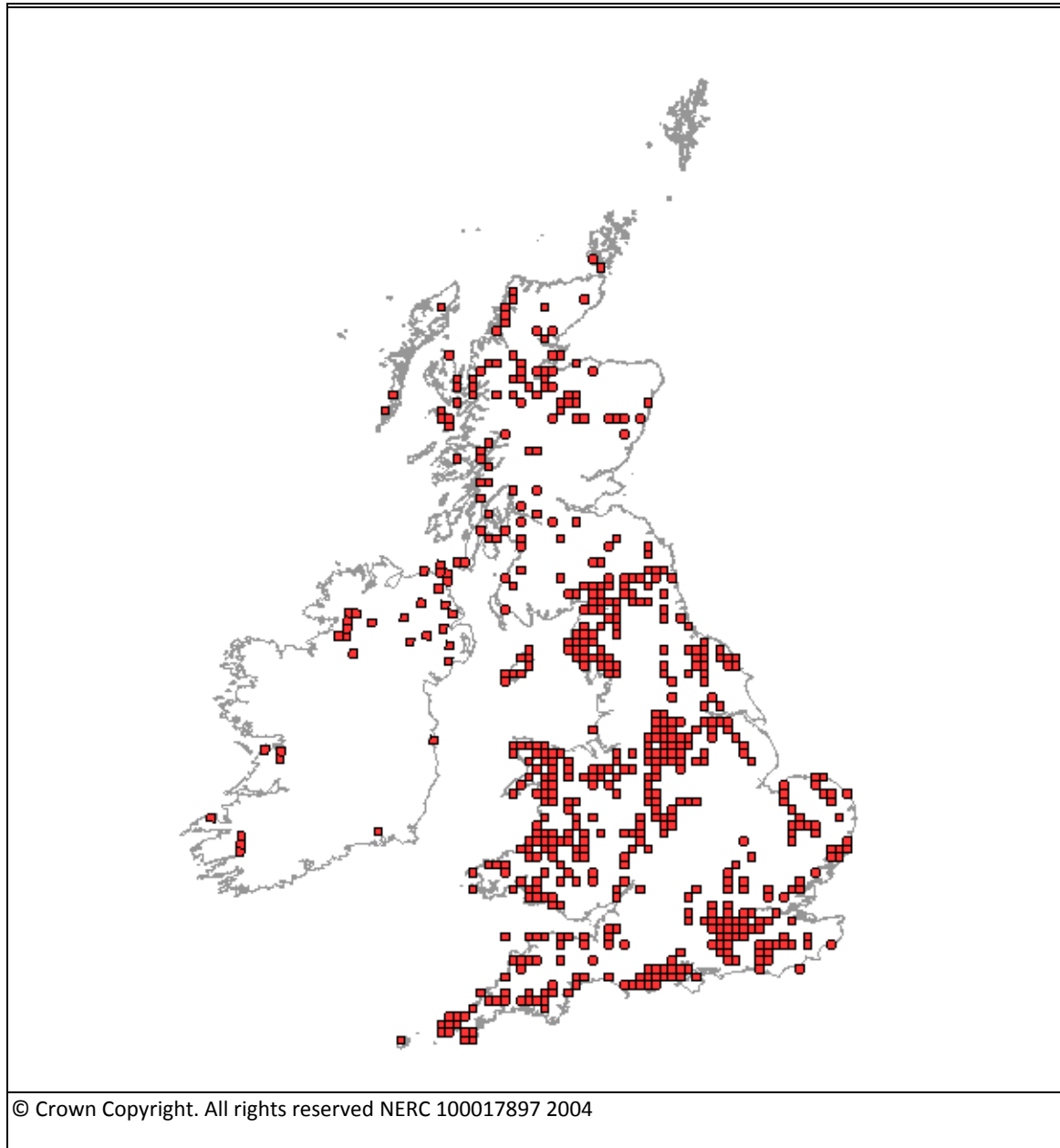
They invade the heather plants, eating young shoots and damaging stems, with the result that the heather turns a foxy-red colour by July before dying and going completely grey by the following spring




© Malcolm Storey, 2005, www.bioimages.org.uk

10km squares with records for *Lochmaea suturalis* (Heather Beetle) in Great Britain and Ireland

Includes the following taxa: *Heather Beetle*.



10km square legend

 Present in 10km squares

The two photographs below show the damage caused by the Heather Beetle on Brackenhurst Heath at Greenham Common in July 2010.



This photograph shows the damage in September 2010 where the Heather has died off.



Summary of Results

During the survey 237 records were taken comprising of 385 individual beetles. The number of species recorded at each site were:

Greenham- Brackenhurst Heath	13
Greenham- Crookham restoration area	16
Greenham- Sandelford Heath	34
Greenham (other areas hand searched)	28
Snelsmore- Dry Heath	14
Snelsmore- Mire	14
Snelsmore (other areas hand searched)	36
Bowdown Woods (hand search only)	04
Thatcham Reed Beds (hand search only)	07

After 1 year it is impossible to draw any conclusions about the health of the invertebrate population at Greenham or Snelsmore Common. The number of species of beetle recorded at both sites is small compared to the number of UK species. The number of species recorded at Greenham during 2010 was 68 and even if you are to include all my records for Greenham that were gained from hand searches and some pitfall traps in Brackenhurst heath during 2009 then the total number of species is still only 95. At Snelsmore I recorded 51 species for 2010; again if you include 2009 the total rises to 55. This compares to a UK species list for Beetles being in excess of 4,000. Further surveys and collecting will increase this list and by using similar surveying techniques some trends may be drawn. The transition of Crookham from an area of scrub to a more traditional heath should provide some interesting finds as the area matures. It is clear that all of Greenham is fairly young as a heathland (simply comparing the average vegetation heights between Greenham and Snelsmore highlights this).

Management to assist invertebrates

‘Buglife’ with the assistance of DEFRA publish an invertebrate management guide for lowland heaths. Below is an abridged version of their recommendations.
(<http://www.buglife.org.uk/conservation/adviceonmanagingbaphabitats/lowlandheathland>)

Heathland is a very important habitat for invertebrates. It provides a niche for many rare species. Habitat management should attempt to maintain a mosaic of vegetation types. Without active management heaths can rapidly become dominated by scrub and woodland. The target should be to maintain a structural diversity that provides a wide range of habitat niches with a diverse age structure. This should include:

- **Bare ground**
This is important for a number of insects that use the areas for nesting, chasing prey and basking. The sandy soils of heaths provide warm, dry conditions that favour invertebrates and provide a good burrowing substrate. Any open south facing slope can provide valuable nesting sites for solitary bees and wasps. Bare, sandy ground can be easily created by scraping shallow pits or creating mounds and banks.
- **Mosses and lichens**
The endangered ladybird spider is only found on dry sandy heaths with bare and lichen covered areas.
- **Low herbs on disturbed ground**
Annual and ruderal plants can provide pollen and nectar in a habitat that is poor in nectar bearing flowers outside the period in which heather flowers.
- **Dwarf shrubs of a varied age range**
These can provide structures for spiders to spin webs from and give shelter to invertebrates. Mature stands of heather should be retained as these provide specialist habitat for species such as the Lynx spider (*Oxyopes heterophthalmus*) which only lives on very mature heather.
The Silver-studded blue butterfly and other specialists need young heather, but maximum diversity tends to be with the main growth stages.

- **Wet heath and mire**
Wet mire should ideally have a range of vegetation including low plants such as Sphagnum and Sundews, as well as taller rushes, sedges, and grasses. Grazing and turf cutting are the best management options to maintain open conditions. Pools and areas of boggy ground should never be deepened, as this may break through the iron pan resulting in the area drying.
- **Scattered trees and shrubs**
Scrub species such as broom, gorse, and birch support large numbers of invertebrates. It offers shelter and structural diversity; however scrub encroachment onto the heath must be controlled.
- **Mature trees and dead wood**
Mature trees provide a great habitat for invertebrates associated with rotten and dead wood. Wood left on the ground and not 'tidied' gives shelter and a home for many invertebrates. Some logs should also be buried up-right, this makes the wood less damp so providing habitat for a different set of species including some Longhorn beetles and Stag beetles.

Grazing is the best method of management for heathland. It keeps vegetation under control without major changes that cutting and clearance can cause. Stocking rates on heathland must be kept low as overgrazing may lead to a reduction in diversity of both vegetation structure and species richness. (Kirby P, 2001)

Rabbits on Heath are highly beneficial, their digging and grazing are helpful to all invertebrates. Their grazing produces a mosaic of vegetation structures. Their dung and carrion support rich invertebrate communities. (Kirby P, 2001)

Pests

The damage caused by the Heather Beetle at Greenham Common has not been severe. Visible damage was confined to a 30 metre band along the East side of Brackenhurst Heath. This may be due to the available damp area that is required for the Beetle. I will continue to monitor damage during 2011, but controlling this beetle if a severe outbreak occurs may be impossible. The Heather Trust has researched the beetle and has concluded that spraying is highly undesirable as there is no pesticide that targets only the Heather Beetle. Burning areas may halt the spread but again the damage caused by the fire may outweigh the damage caused by the beetle. In most years predators control the beetles spread and it is only occasionally that a large outbreak occurs. They report that damage to a heath on a small scale can in fact have a positive effect on the heath. It opens up bare ground and imposes an age structure on the heathers.

**Appendix
Brackenhurst Heath**

Pitfall traps

<u>Taxon</u>	<u>Vernacular</u>	<u>Gridref</u>	<u>Quantity</u>	<u>Date</u>	<u>Recorder</u>	<u>Method</u>	<u>Stage</u>	<u>Comment</u>
Poecilus versicolor		SU4871064157	5	28-May-10	Lloyd Garvey	Pitfall trap	Adult	
Harpalus latus		SU4871064157	3	28-May-10	Lloyd Garvey	Pitfall trap	Adult	
Harpalus rubripes		SU4871064157	1	28-May-10	Lloyd Garvey	Pitfall trap	Adult	
Carabus problematicus		SU4871064157	1	28-May-10	Lloyd Garvey	Pitfall trap	Adult	
Pterostichus madidus		SU4871064157	1	28-May-10	Lloyd Garvey	Pitfall trap	Adult	
Abax parallelepipedus		SU4871064157	2	28-May-10	Lloyd Garvey	Pitfall trap	Adult	
Typhaeus typhoeus	Minotaur Beetle	SU4871064157	1	28-May-10	Lloyd Garvey	Pitfall trap	Adult	
Poecilus versicolor		SU4871064157	3	31-May-10	Lloyd Garvey	Pitfall trap	Adult	
Harpalus affinis		SU4871064157	1	31-May-10	Lloyd Garvey	Pitfall trap	Adult	
Pterostichus niger		SU4871064157	1	31-May-10	Lloyd Garvey	Pitfall trap	Adult	
Pterostichus madidus		SU4871064157	1	07-Jun-10	Lloyd Garvey	Pitfall trap	Adult	
Poecilus versicolor		SU4871064157	2	07-Jun-10	Lloyd Garvey	Pitfall trap	Adult	
Pterostichus nigrita/rhaeticus		SU4871064157	1	07-Jun-10	Lloyd Garvey	Pitfall trap	Adult	
Lochmaea suturalis	Heather Beetle	SU4871064157	1	07-Jun-10	Lloyd Garvey	Pitfall trap	Adult	
Silpha tristis		SU4871064157	1	21-Jul-10	Lloyd Garvey	Pitfall trap	Adult	
Abax parallelepipedus		SU4871064157	1	23-Jul-10	Lloyd Garvey	Pitfall trap	Adult	
Cicindela campestris	Green Tiger Beetle	SU4871064157	2	24-Jul-10	Lloyd Garvey	Pitfall trap	Adult	
Abax parallelepipedus		SU4871064157	2	24-Jul-10	Lloyd Garvey	Pitfall trap	Adult	
Pterostichus niger		SU4871064157	1	24-Jul-10	Lloyd Garvey	Pitfall trap	Adult	
Harpalus latus		SU4871064157	2	24-Jul-10	Lloyd Garvey	Pitfall trap	Adult	
Pterostichus madidus		SU4871064157	1	24-Jul-10	Lloyd Garvey	Pitfall trap	Adult	
Carabus problematicus		SU4871064157	1	15-Sep-10	Lloyd Garvey	Pitfall trap	Adult	
Abax parallelepipedus		SU4871064157	1	15-Sep-10	Lloyd Garvey	Pitfall trap	Adult	
Carabus problematicus		SU4871064157	1	20-Sep-10	Lloyd Garvey	Pitfall trap	Adult	

Hand searching

<u>Taxon</u>	<u>Vernacular</u>	<u>Gridref</u>	<u>Quantity</u>	<u>Date</u>	<u>Recorder</u>	<u>Method</u>	<u>Stage</u>	<u>Comment</u>
Lochmaea suturalis	Heather Beetle	SU48710641	10	24-May-10	Lloyd Garvey	8. On vegetation	Adult	on ling.
Cicindela campestris	Green Tiger Beetle	SU48710641	4	28-May-10	Lloyd Garvey	On ground	Adult	
Cicindela campestris	Green Tiger Beetle	SU48710641	3	31-May-10	Lloyd Garvey	On ground	Adult	
Byturus ochraceus		SU48710641	1	07-Jun-10	Lloyd Garvey	In flower	Adult	on Elder flower
Pterostichus niger		SU48710641	1	07-Jun-10	Lloyd Garvey	Leaf litter	Adult	
Carabus problematicus		SU48710641	1	20-Sep-10	Lloyd Garvey	On ground	Adult	

The pitfall traps were in place in 3 individual weekly periods in May, July, and September. Hand searching proved difficult as little cover for invertebrates are present such as rotting tree trunks, large rocks, leaf litter etc. Brackenhurst Heath is where the Heather Beetle damage was observed. They require moist ground to spend the winter and it is probable that they do this in Aldenbridge gully which lies a few hundred meters to the west. The fact that the Minotaur Beetle was caught signifies the presence of animal dung. The Green Tiger Beetle is also present in this area. They flourish where the ground is bare particularly on sandy soils where their larva tunnel to hide and catch passing prey.

Sandleford Heath

Pitfall traps

<u>Taxon</u>	<u>Vernacular</u>	<u>Gridref</u>	<u>Quantity</u>	<u>Date</u>	<u>Recorder</u>	<u>Method</u>	<u>Stage</u>	<u>Comment</u>
Amara lunicollis		SU4831664843	1	19-May-10	Lloyd Garvey	Pitfall trap	Adult	
Harpalus rufipes	Strawberry Seed Beetle	SU4831664843	1	19-May-10	Lloyd Garvey	Pitfall trap	Adult	
Stenagostus rhombeus		SU4831664843	2	19-May-10	Lloyd Garvey	Pitfall trap	Adult	
Melanotus villosus		SU4831664843	1	19-May-10	Lloyd Garvey	Pitfall trap	Adult	
Poecilus versicolor		SU4831664843	5	19-May-10	Lloyd Garvey	Pitfall trap	Adult	
Agriotes sputator		SU4831664843	2	19-May-10	Lloyd Garvey	Pitfall trap	Adult	
Poecilus versicolor		SU4831664843	6	23-May-10	Lloyd Garvey	Pitfall trap	Adult	
Silpha tristis		SU4831664843	1	23-May-10	Lloyd Garvey	Pitfall trap	Adult	
Silpha atrata		SU4831664843	1	23-May-10	Lloyd Garvey	Pitfall trap	Adult	
Carabus nemoralis		SU4831664843	1	23-May-10	Lloyd Garvey	Pitfall trap	Adult	
Byrrhus pilula	Pill Beetle	SU4831664843	1	23-May-10	Lloyd Garvey	Pitfall trap	Adult	
Bembidion properans		SU4831664843	1	23-May-10	Lloyd Garvey	Pitfall trap	Adult	
Amara convexior		SU4831664843	1	23-May-10	Lloyd Garvey	Pitfall trap	Adult	
Amara ovata		SU4831664843	1	24-May-10	Lloyd Garvey	Pitfall trap	Adult	
Cylindrinotus laevioctostriatus		SU4831664843	1	24-May-10	Lloyd Garvey	Pitfall trap	Adult	
Notiophilus biguttatus		SU4831664843	2	24-May-10	Lloyd Garvey	Pitfall trap	Adult	
Agriotes sputator		SU4831664843	1	24-May-10	Lloyd Garvey	Pitfall trap	Adult	
Harpalus rufipalpis		SU4831664843	1	24-May-10	Lloyd Garvey	Pitfall trap	Adult	
Syntomus foveatus		SU4831664843	3	24-May-10	Lloyd Garvey	Pitfall trap	Adult	
Silpha atrata		SU4831664843	1	24-May-10	Lloyd Garvey	Pitfall trap	Adult	
Philonthus laminatus		SU4831664843	1	24-May-10	Lloyd Garvey	Pitfall trap	Adult	
Philonthus addendus		SU4831664843	1	24-May-10	Lloyd Garvey	Pitfall trap	Adult	

<i>Cicindela campestris</i>	Green Tiger Beetle	SU4831664843	1	28-May-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Poecilus versicolor</i>		SU4831664843	1	28-May-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Cicindela campestris</i>	Green Tiger Beetle	SU4831664843	1	31-May-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Carabus nemoralis</i>		SU4831664843	1	31-May-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Poecilus versicolor</i>		SU4831664843	3	31-May-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Harpalus latus</i>		SU4831664843	1	31-May-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Amara convexior</i>		SU4831664843	1	31-May-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Olisthopus rotundatus</i>		SU4831664843	1	07-Jun-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Abax parallelepipedus</i>		SU4831664843	1	07-Jun-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Harpalus tardus</i>		SU4831664843	1	07-Jun-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Silpha tristis</i>		SU4831664843	1	22-Jul-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Pterostichus madidus</i>		SU4831664843	1	22-Jul-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Harpalus rufipes</i>	Strawberry Seed Beetle	SU4831664843	1	22-Jul-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Nebria salina</i>		SU4831664843	1	23-Sep-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Carabus problematicus</i>		SU4831664843	1	25-Sep-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Nebria salina</i>		SU4831664843	2	25-Sep-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Aphodius haemorrhoidalis</i>		SU4831664843	1	25-Sep-10	Lloyd Garvey	Pitfall trap	Adult	
<i>Nebria salina</i>		SU4831664843	1	27-Sep-10	Lloyd Garvey	Pitfall trap	Adult	

Hand Searching

<u>Taxon</u>	<u>Vernacular</u>	<u>Gridref</u>	<u>Quantity</u>	<u>Date</u>	<u>Recorder</u>	<u>Method</u>	<u>Stage</u>	<u>Comment</u>
<i>Cicindela campestris</i>	Green Tiger Beetle	SU4831664843	1	16-Apr-10	Lloyd Garvey	Sighting	Adult	on sandy path
<i>Dendroxena quadrimaculata</i>		SU4831664843	1	17-May-10	Lloyd Garvey	Sighting	Adult	on Silver Birch
<i>Scaphidium quadrimaculatum</i>		SU4831664843	2	17-May-10	Lloyd Garvey	2. Under stones, logs, debris	Adult	under S. Birch log
<i>Coccinella septempunctata</i>	7-spot Ladybird	SU4831664843	2	17-May-10	Lloyd Garvey	Sighting	Adult	
<i>Harmonia axyridis</i>	Harlequin Ladybird	SU4831664843	5	17-May-10	Lloyd Garvey	Sighting	Adult	
<i>Aphodius fimetarius</i>		SU4831664843	1	17-May-10	Lloyd Garvey	On ground	Adult	
<i>Hister unicolor</i>		SU4831664843	1	19-May-10	Lloyd Garvey	Sighting	Adult	near cow dung
<i>Aphodius fimetarius</i>		SU4831664843	1	19-May-10	Lloyd Garvey	Sighting	Adult	near cow dung
<i>Hister bissexstriatus</i>		SU4831664843	1	19-May-10	Lloyd Garvey	Dung, droppings or frass	Adult	on cow dung
<i>Cicindela campestris</i>	Green Tiger Beetle	SU4831664843	1	24-May-10	Lloyd Garvey	Sighting	Adult	on ground
<i>Cantharis rustica</i>		SU4831664843	1	28-May-10	Lloyd Garvey	5. On tree trunk	Adult	on Hawthorn
<i>Lochmaea suturalis</i>	Heather Beetle	SU4831664843	1	28-May-10	Lloyd Garvey	Sighting	Adult	under ling

Green Tiger Beetles were also observed here. The ground is again bare so ideal for their larval burrows. Abundant numbers of *Poecilus versicolor* were present. These are shiny green beetles approximately 10-12 mm long and are widespread throughout the UK. *Silpha atrata* are snail eating specialists and have an elongated head which they use to push into the snails shell. The Heather Beetle was again observed in this area though no damage was seen. There appears to be limited overwintering areas close by so numbers were probably lower than at Brackenhurst Heath

Crookham Common - Heathland restoration area

Pitfall traps

<u>Taxon</u>	<u>Vernacular</u>	<u>Gridref</u>	<u>Quantity</u>	<u>Date</u>	<u>Recorder</u>	<u>Method</u>	<u>Stage</u>	<u>Comment</u>
Abax parallelepipedus		SU5233964509	5	16-Jul-10	Lloyd Garvey	Pitfall trap	Adult	
Carabus problematicus		SU5233964509	1	16-Jul-10	Lloyd Garvey	Pitfall trap	Adult	
Pterostichus madidus		SU5233964509	2	16-Jul-10	Lloyd Garvey	Pitfall trap	Adult	
Carabus problematicus		SU5233964509	1	21-Jul-10	Lloyd Garvey	Pitfall trap	Adult	
Carabus problematicus		SU5233964509	1	29-Sep-10	Lloyd Garvey	Pitfall trap	Adult	
Ocypus olens	Devil's Coach-horse	SU5233964509	1	29-Sep-10	Lloyd Garvey	Pitfall trap	Adult	
Abax parallelepipedus		SU5233964509	1	29-Sep-10	Lloyd Garvey	Pitfall trap	Adult	
Ocypus olens	Devil's Coach-horse	SU5233964509	1	03-Oct-10	Lloyd Garvey	Pitfall trap	Adult	
Abax parallelepipedus		SU5233964509	1	03-Oct-10	Lloyd Garvey	Pitfall trap	Adult	

Hand Searching

Taxon	Vernacular	Gridref	Quantity	Date	Recorder	Method	Stage	Comment
Tachinus signatus		SU5233964509	1	06-Apr-10	Lloyd Garvey	Sighting	Adult	near horse dung
Silpha atrata		SU5233964509	1	10-Apr-10	Lloyd Garvey	2. Under stones, logs, debris	Adult	Under moss leaf litter in Birch
Notiophilus biguttatus		SU5233964509	1	10-Apr-10	Lloyd Garvey	2. Under stones, logs, debris	Adult	Under moss/leaves in S.Birch
Philonthus marginatus		SU5233964509	1	10-Apr-10	Lloyd Garvey	2. Under stones, logs, debris	Adult	Amongst Silver Birch scrub
Lochmaea suturalis	Heather Beetle	SU5233964509	10	10-Apr-10	Lloyd Garvey	8. On vegetation	Adult	On ling
Coccinella septempunctata	7-spot Ladybird	SU5233964509	1	10-Apr-10	Lloyd Garvey	8. On vegetation	Adult	On ling
Aphodius prodromus		SU5233964509	1	10-Apr-10	Lloyd Garvey	Dung, droppings or frass	Adult	Next to horse dung
Amara similata		SU5233964509	1	10-Apr-10	Lloyd Garvey	2. Under stones, logs, debris	Adult	amongst birch scrub
Othius punctulatus		SU5233964509	1	10-Apr-10	Lloyd Garvey	Under moss	Adult	
Philonthus addendus		SU5233964509	1	10-Apr-10	Lloyd Garvey	Under moss	Adult	
Coccinella septempunctata	7-spot Ladybird	SU5233964509	9	10-Apr-10	Lloyd Garvey	Sighting	Adult	
Sitona lineatus		SU5233964509	1	10-Apr-10	Lloyd Garvey	Under moss	Adult	
Byrrhus pilula	Pill Beetle	SU5233964509	1	17-May-10	Lloyd Garvey	Sighting	Adult	amongst S.Birch scrub
Mycetophagus quadripustulatus		SU5233964509	1	11-Jun-10	Lloyd Garvey	2. Under stones, logs, debris	Adult	
Notiophilus biguttatus		SU5233964509	1	11-Jun-10	Lloyd Garvey	Under moss	Adult	
Calathus fuscipes		SU5233964509	1	11-Jun-10	Lloyd Garvey	Under moss	Adult	
Cylindrinotus laevioctostriatus		SU5233964509	1	11-Jun-10	Lloyd Garvey	Under moss	Adult	(as known as nalassus laevioctostriatus)
Abax parallelepipedus		SU5233964509	1	12-Jun-10	Lloyd Garvey	1. In litter	Adult	
Cylindrinotus laevioctostriatus		SU5233964509	1	15-Sep-10	Lloyd Garvey	Leaf litter	Adult	

This is currently a very different habitat to the other locations being more of a Birch scrub than a heathland. The pitfall traps proved to be disappointing maybe due to the fact it was a very dry summer and the mosses, which are normally good habitat for invertebrates, dried up. Some of the larger beetles were caught here, *Carabus problematicus* looks very similar to the Violet Ground Beetle (it is sometimes called the Coarse Violet Ground Beetle) and can be nearly 3cm long. *Abax Parallelepipedus* is another fairly widespread and large beetle being 22mm long a fairly square stocky beetle designed for pushing its way through obstacles. The heather beetle was also recorded here, the habitat under the scrub amongst the moss provides ideal habitat for it to over-winter. Once the restoration is started this may reduce the numbers of this beetle.

Greenham Common

(These are records are from hand searches at many locations on Greenham Common).

Hand Searching

<u>Taxon</u>	<u>Vernacular</u>	<u>Site</u>	<u>Gridref</u>	<u>Quantity</u>	<u>Date</u>	<u>Method</u>	<u>Comment</u>
Notiophilus biguttatus		Greenham Common	SU5064	1	08-Apr-10	2. Under stones, logs, debris	By building 616
Harpalus affinis		Greenham Common	SU5064	1	16-Apr-10	Sighting	on gravel path
Agriotes sputator		Greenham Common	SU5064	1	16-Apr-10	Sighting	on grass path at SU49542,64832
Aphodius fimetarius		Greenham Common	SU5064	1	16-Apr-10	Sighting	on grass path at Su49542,64832
Anisodactylus binotatus		Greenham Common	SU5064	1	17-Apr-10	Sighting	on gravel path
Amara familiaris		Greenham Common	SU5064	1	17-Apr-10	Sighting	on gravel path
Poecilus versicolor		Greenham Common	SU5064	1	17-Apr-10	Sighting	on gravel path
Coccinella septempunctata	7-spot Ladybird	Greenham Common	SU5064	1	17-Apr-10	Sighting	section 2 of b/fly transect
Cicindela campestris	Green Tiger Beetle	Greenham Common	SU5064	5	17-Apr-10	Sighting	on b/fly transect sec.3
Typhaeus typhoeus	Minotaur Beetle	Greenham Common	SU5064	1	23-May-10	Sighting	off path
Platyrhinus resinosus	Cramp-ball Fungus Weevil	Greenham Common	SU5064	1	24-May-10	Sighting	
Chrysolina polita		Greenham Common	SU5064	1	31-May-10	Sighting	off nettle
Rhagium bifasciatum		Greenham Common	SU5064	1	02-Jun-10	Sighting	by building 616
Agonum marginatum		Greenham Common	SU5064	1	02-Jun-10	Under moss	At Great Crested Newt pond
Colymbetes fuscus		Greenham Common	SU5064	1	02-Jun-10	Under moss	next to Great Crested Newt pond

<i>Phyllobius pomaceus</i>		Greenham Common	SU5064	1	02-Jun-10	Under moss	near Great Crested Newt pond
<i>Pyrochroa serraticornis</i>	Common Cardinal Beetle	Greenham Common	SU5064	1	20-Jun-10	Hand searching	in car park /meadow
<i>Harmonia axyridis</i>	Harlequin Ladybird	Greenham Common	SU5064	1	21-Jun-10	Sighting	by 616
<i>Chrysolina polita</i>		Greenham Common	SU5064	1	23-Jun-10	Sighting	seen attacking a snail on Himalayan pink balsam
<i>Adalia bipunctata</i>	2-spot Ladybird	Greenham Common	SU5064	1	01-Jul-10	Light Trapping	moth trap
<i>Typhaeus typhoeus</i>	Minotaur Beetle	Greenham Common- Aldenbridge gulley	SU489640	1	01-Aug-10	Sighting	under moss/leaf litter
<i>Oxypselaphus obscurus</i>		Greenham Common- Aldenbridge gulley	SU489640	3	01-Aug-10	Leaf litter	
<i>Notiophilus biguttatus</i>		Greenham Common- Aldenbridge gulley	SU489640	1	01-Aug-10	Leaf litter	
<i>Carabus violaceus</i>	Violet Ground Beetle	Greenham Common- Aldenbridge gulley	SU489640	1	01-Aug-10	Leaf litter	
<i>Platynus assimilis</i>		Greenham Common- Aldenbridge gulley	SU489640	1	01-Aug-10	Leaf litter	
<i>Othius punctulatus</i>		Greenham Common- Aldenbridge gulley	SU489640	1	01-Aug-10	Under moss	
<i>Ocypus olens</i>	Devil's Coach-horse	Greenham Common	SU5064	1	13-Sep-10	Leaf litter	Hand search at Peckmoor copse SU488640
<i>Notiophilus biguttatus</i>		Greenham Common	SU5064	1	13-Sep-10	Leaf litter	Hand search at Peckmoor Copse SU488640

Bradycellus verbasci		Greenham Common	SU5064	3	13-Sep-10	Leaf litter	hand search in Peckmoor Copse SU488640
Anisotoma humeralis		Greenham Common	SU5064	1	13-Sep-10	Leaf litter	Hand search in Peckmoor Copse SU488640
Bembidion lunulatum		Greenham Common	SU5064	1	13-Sep-10	Leaf litter	hand search in Peckmoor copse SU488640
Ocypus olens	Devil's Coach-horse	Greenham Common	SU5064	1	15-Sep-10	Leaf litter	in Peckmoor copse
Ocypus olens	Devil's Coach-horse	Greenham Common	SU5064	2	17-Sep-10	1. In litter	found in comp.13 SU51319,64922
Nebria salina		Greenham Common	SU5064	1	17-Sep-10	Leaf litter	in comp. 13
Galeruca tanaceti		Greenham Common	SU5064	2	25-Sep-10	Sighting	by building 616 on ground

Snelsmore Common - Mire

Pitfall trap

<u>Taxon</u>	<u>Vernacular</u>	<u>Gridref</u>	<u>Quantity</u>	<u>Date</u>	<u>Method</u>	<u>Stage</u>	<u>Comment</u>
Agonum sexpunctatum		SU4637670599	1	07-May-10	Pitfall trap	Adult	Nationally Scarce A
Agonum ericeti		SU4637670599	1	07-May-10	Pitfall trap	Adult	Nationally Scarce B
Pterostichus niger		SU4637670599	1	07-May-10	Pitfall trap	Adult	
Staphylinus erythropterus		SU4637670599	1	07-May-10	Pitfall trap	Adult	
Typhaeus typhoeus	Minotaur Beetle	SU4637670599	1	13-May-10	Pitfall trap	Adult	
Bembidion illigeri		SU4637670599	1	13-May-10	Pitfall trap	Adult	
Pterostichus madidus		SU4637670599	1	13-May-10	Pitfall trap	Adult	
Bembidion tetracolum		SU4637670599	1	13-May-10	Pitfall trap	Adult	
Scaphidium quadrimaculatum		SU4637670599	1	15-Aug-10	Pitfall trap	Adult	
Sitona lineatus		SU4637670599	2	15-Aug-10	Pitfall trap	Adult	

This includes two fairly scarce species, *Agonum sexpunctatum* (first record in Berkshire since 1939) and *Agonum ericeti*. The year's dry summer affected the mire badly where most of the pools dried up.

Hand Searching

<u>Taxon</u>	<u>Vernacular</u>	<u>Gridref</u>	<u>Quantity</u>	<u>Date</u>	<u>Method</u>	<u>Stage</u>	<u>Comment</u>
Syntomus foveatus		SU4637670599	1	15-Apr-10	2. Under stones, logs, debris	Adult	
Bembidion guttula		SU4637670599	1	15-Apr-10	2. Under stones, logs, debris	Adult	
Lochmaea suturalis	Heather Beetle	SU4637670599	1	15-Apr-10	Under moss	Adult	in moss amongst cross leaved heather next to mire
Chaetocnema confuse		SU4637670599	1	15-Apr-10	Under moss	Adult	next to mire (wet heath)
Carabus problematicus		SU4637670599	1	15-Apr-10	Sighting	Adult	
Coccinella septempunctata	7-spot Ladybird	SU4637670599	1	15-Apr-10	Sighting	Adult	

The Heather Beetle was recorded here but no visible damage occurred. The site became so dry that summer searches proved fruitless.

Snelmore Common - Plateau

Pitfall Traps

Taxon	Vernacular	Gridref	Quantity	Date	Method	Stage	Comment
<i>Ampedus sanguinolentus</i>		SU4614170848	2	07-May-10	Pitfall trap	Adult	
<i>Notiophilus biguttatus</i>		SU4614170848	1	07-May-10	Pitfall trap	Adult	
<i>Pterostichus diligens</i>		SU4614170848	2	07-May-10	Pitfall trap	Adult	
<i>Poecilus versicolor</i>		SU4614170848	3	07-May-10	Pitfall trap	Adult	
<i>Aphodius fimetarius</i>		SU4614170848	1	07-May-10	Pitfall trap	Adult	
<i>Bembidion guttula</i>		SU4614170848	1	07-May-10	Pitfall trap	Adult	
<i>Carabus problematicus</i>		SU4614170848	1	09-May-10	Pitfall trap	Adult	
<i>Poecilus versicolor</i>		SU4614170848	13	13-May-10	Pitfall trap	Adult	
<i>Silpha atrata</i>		SU4614170848	1	13-May-10	Pitfall trap	Adult	
<i>Nebria salina</i>		SU4614170848	1	13-May-10	Pitfall trap	Adult	
<i>Pterostichus diligens</i>		SU4614170848	2	13-May-10	Pitfall trap	Adult	
<i>Bembidion lampros</i>		SU4614170848	3	13-May-10	Pitfall trap	Adult	
<i>Bembidion obtusum</i>		SU4614170848	3	13-May-10	Pitfall trap	Adult	
<i>Cylindrinotus laevioctostriatus</i>		SU4614170848	1	06-Oct-10	Pitfall trap	Adult	
<i>Amara familiaris</i>		SU4614170848	1	06-Oct-10	Pitfall trap	Adult	

This is on the main part of Snelmore's heathland. By far the most numerous species was *Poecilus versicolor*. *Bembidion lampros* favours dry sunny areas and is common in Gardens.

Hand Searching

<u>Taxon</u>	<u>Vernacular</u>	<u>Gridref</u>	<u>Quantity</u>	<u>Date</u>	<u>Method</u>	<u>Stage</u>	<u>Comment</u>
Cicindela campestris	Green Tiger Beetle	SU4614170848	5	15-May-10	Sighting	Adult	
Silpha atrata		SU4614170848	1	15-May-10	Sighting	Adult	

The extremely dry conditions again had a negative effect on hand searches and most visits found no individuals. The Green Tiger Beetle which flourishes on dry sandy soils was easily seen and is quick to fly along paths in front of pedestrians. Its larva burrows can be seen as small drill like holes into sandy paths.

Snelmore Common

(These are records are from hand searches at many locations on Snelmore Common).

Hand searching

<u>Taxon</u>	<u>Vernacular</u>	<u>Gridref</u>	<u>Quantity</u>	<u>Date</u>	<u>Method</u>	<u>Stage</u>	<u>Comment</u>
<i>Coccinella septempunctata</i>	7-spot Ladybird	SU4671	1	27-Feb-10	0. Not Recorded	Adult	By Fire tower
<i>Pterostichus nigrita/rhaeticus</i>		SU4671	1	01-Apr-10	2. Under stones, logs, debris	Adult	leaf litter North side of common
<i>Typhaeus typhoeus</i>	Minotaur Beetle	SU4671	1	01-Apr-10	2. Under stones, logs, debris	Adult	n. side of common
<i>Nebria brevicollis</i>		SU4671	1	11-Apr-10	2. Under stones, logs, debris	Adult	by mire
<i>Aphodius prodromus</i>		SU4671	1	12-Apr-10	Dung, droppings or frass	Adult	By horse dung
<i>Silpha atrata</i>		SU4671	1	12-Apr-10	2. Under stones, logs, debris	Adult	Mire edge
<i>Notiophilus biguttatus</i>		SU4671	1	12-Apr-10	2. Under stones, logs, debris	Adult	mire edge
<i>Lochmaea suturalis</i>	Heather Beetle	SU4671	1	12-Apr-10	8. On vegetation	Adult	on ling by mire
<i>Leistus spinibarbis</i>		SU4671	1	15-Apr-10	2. Under stones, logs, debris	Adult	
<i>Cicindela campestris</i>	Green Tiger Beetle	SU4671	1	15-Apr-10	On ground	Adult	on sandy paths. Lots present
<i>Scaphidium quadrimaculatum</i>		SU4671	1	15-Apr-10	2. Under stones, logs, debris	Adult	mire edge
<i>Pyrochroa coccinea</i>	Black-headed Cardinal Beetle	SU4671	1	09-May-10	Hand searching	Adult	by compound
<i>Notiophilus biguttatus</i>		SU4671	3	13-May-10	2. Under stones, logs, debris	Adult	at new concrete pond under moss
<i>Agonum sexpunctatum</i>		SU4671	1	13-May-10	2. Under stones, logs, debris	Adult	at new concrete pond under moss

<i>Notiophilus palustris</i>		SU4671	1	13-May-10	2. Under stones, logs, debris	Adult	at new concrete pond under moss
<i>Nebria salina</i>		SU4671	1	13-May-10	2. Under stones, logs, debris	Adult	new concrete pond under moss
<i>Cicindela campestris</i>	Green Tiger Beetle	SU4671	1	13-May-10	Sighting	Adult	
<i>Byrrhus pilula</i>	Pill Beetle	SU4671	1	16-May-10	2. Under stones, logs, debris	Adult	
<i>Poecilus cupreus</i>		SU4671	1	20-May-10	2. Under stones, logs, debris	Adult	at new concrete pond
<i>Notiophilus biguttatus</i>		SU4671	1	27-May-10	Hand searching	Adult	under moss at su45844,70997
<i>Agonum sexpunctatum</i>		SU4671	2	27-May-10	1. In litter	Adult	under moss at SU45844,70997
<i>Poecilus versicolor</i>		SU4671	1	27-May-10	1. In litter	Adult	under moss at SU45844,70997
<i>Oxypselaphus obscurus</i>		SU4671	2	27-May-10	1. In litter	Adult	under moss at SU45844,70997
<i>Olophrum fuscum</i>		SU4671	1	27-May-10	1. In litter	Adult	Under moss at SU45844,70997
<i>Notiophilus biguttatus</i>		SU4671	2	27-May-10	Under moss	Adult	at su45844,70997 (hand search amongst moss)
<i>Agonum sexpunctatum</i>		SU4671	2	27-May-10	Under moss	Adult	under moss at su45844,70997
<i>Poecilus versicolor</i>		SU4671	1	27-May-10	Under moss	Adult	under moss at SU45844,70997 (hand search)
<i>Oxypselaphus obscurus</i>		SU4671	2	27-May-10	Under moss	Adult	under moss at SU45844,70997 (hand search)
<i>Olophrum fuscum</i>		SU4671	1	27-May-10	Under moss	Adult	Under moss at SU45844,70997 (hand search)
<i>Chrysolina polita</i>		SU4671	1	03-Jun-10	Hand searching	Adult	on nettle at car park
<i>Poecilus versicolor</i>		SU4671	1	03-Jun-10	2. Under stones, logs, debris	Adult	at new concrete pond
<i>Oxypselaphus obscurus</i>		SU4671	1	03-Jun-10	2. Under stones, logs, debris	Adult	under moss at new concrete pond
<i>Elaphrus cupreus</i>		SU4671	1	03-Jun-10	Hand searching	Adult	by new educational pond
<i>Pterostichus diligens</i>		SU4671	1	03-Jun-10	2. Under stones, logs, debris	Adult	by new educational pond
<i>Rhagium bifasciatum</i>		SU4671	1	03-Jun-10	2. Under stones, logs, debris	Adult	by new educational pond

<i>Oxypselaphus obscurus</i>		SU4671	1	03-Jun-10	Under moss	Adult	
<i>Agabus chalconatus</i>		SU4671	1	03-Jun-10	Under moss	Adult	
<i>Oxypselaphus obscurus</i>		SU4671	1	03-Jun-10	Under moss	Adult	
<i>Pyrochroa coccinea</i>	Black-headed Cardinal Beetle	SU4671	1	03-Jun-10	Sighting	Adult	by new concrete pond
<i>Coccinella septempunctata</i>	7-spot Ladybird	SU4671	1	03-Jun-10	Sighting	Adult	by new concrete pond
<i>Bembidion obtusum</i>		SU4671	1	06-Jun-10	Sighting	Adult	by new educational pond
<i>Agonum fuliginosum</i>		SU4671	5	01-Jul-10	Leaf litter	Adult	hand search at SU463710 of leaf litter in wood South of car park
<i>Platynus assimilis</i>		SU4671	1	01-Jul-10	Leaf litter	Adult	in leaf litter in Woodland south of car park (SU463710)
<i>Bembidion doris</i>		SU4671	11	01-Jul-10	Leaf litter	Adult	leaf litter in woodland south of car park (SU463710)
<i>Bembidion dentellum</i>		SU4671	10	01-Jul-10	Leaf litter	Adult	in leaf litter in woodland south of car park (SU463710)
<i>Acupalpus dubius</i>		SU4671	1	01-Jul-10	Leaf litter	Adult	in leaf litter in woodland south of car park (SU463710)
<i>Halyzia sedecimguttata</i>	Orange Ladybird	SU4671	1	02-Jul-10	Light Trapping	Adult	light trap for moth night
<i>Necrodes littoralis</i>		SU4671	1	02-Jul-10	Light Trapping	Adult	light trap (moth trap)
<i>Melanotus villosus</i>		SU4671	1	02-Jul-10	Light Trapping	Adult	moth trap
<i>Necrodes littoralis</i>		SU4671	1	10-Jul-10	Light Trapping	Adult	
<i>Pterostichus madidus</i>		SU4671	1	10-Jul-10	On ground	Adult	
<i>Arhopalus rusticus</i>		SU4671	2	10-Jul-10	Light Trapping	Adult	
<i>Stenagostus rhombeus</i>		SU4671	1	10-Jul-10	Light Trapping	Adult	by rangers office
<i>Melanotus villosus</i>		SU4671	2	10-Jul-10	Light Trapping	Adult	by rangers office
<i>Platynus assimilis</i>		SU4671	1	06-Oct-10	On ground	Adult	by educational pond.

Bembidion doris and *Bembidion dentellum* were abundant in an area just south of the Rangers office. This is the area that leads to the mire. These small beetles (between 3 and 5 mm long) favour damp boggy habitats. *Agonum sexpunctatum* was discovered in old concrete foundations on the common which is being transformed into a pond.

Species list for Greenham Common 2010

Taxon	Vernacular	Records	Individuals	Status
<i>Colymbetes fuscus</i>		1	1	
<i>Carabus nemoralis</i>		2	2	
<i>Carabus problematicus</i>		8	8	
<i>Carabus violaceus</i>	Violet Ground Beetle	1	1	
<i>Nebria salina</i>		4	5	
<i>Notiophilus biguttatus</i>		6	7	
<i>Cicindela campestris</i>	Green Tiger Beetle	8	18	
<i>Bembidion lunulatum</i>		1	1	
<i>Bembidion properans</i>		1	1	
<i>Poecilus versicolor</i>		8	26	
<i>Pterostichus madidus</i>		5	6	
<i>Pterostichus niger</i>		3	3	
<i>Abax parallelepipedus</i>		9	15	
<i>Calathus fuscipes</i>		1	1	
<i>Olisthopus rotundatus</i>		1	1	
<i>Oxypselaphus obscurus</i>		1	3	
<i>Agonum marginatum</i>		1	1	
<i>Platynus assimilis</i>		1	1	
<i>Amara convexior</i>		2	2	
<i>Amara familiaris</i>		1	1	
<i>Amara lunicollis</i>		1	1	
<i>Amara ovata</i>		1	1	
<i>Amara similata</i>		1	1	
<i>Harpalus affinis</i>		2	2	
<i>Harpalus latus</i>		3	6	
<i>Harpalus rubripes</i>		1	1	
<i>Harpalus rufipalpis</i>		1	1	
<i>Harpalus tardus</i>		1	1	
<i>Harpalus rufipes</i>	Strawberry Seed Beetle	2	2	
<i>Anisodactylus binotatus</i>		1	1	
<i>Bradycellus verbasci</i>		1	3	
<i>Syntomus foveatus</i>		1	3	
<i>Hister bissexstriatus</i>		1	1	Nb
<i>Hister unicolor</i>		1	1	
<i>Anisotoma humeralis</i>		1	1	
<i>Dendroxena quadrimaculata</i>		1	1	Nb
<i>Silpha atrata</i>		3	3	
<i>Silpha tristis</i>		3	3	
<i>Tachinus signatus</i>		1	1	
<i>Scaphidium quadrimaculatum</i>		1	2	

<i>Philonthus addendus</i>		2	2	
<i>Philonthus laminatus</i>		1	1	
<i>Philonthus marginatus</i>		1	1	
<i>Ocypus olens</i>	Devil's Coach-horse	5	6	
<i>Othius punctulatus</i>		2	2	
<i>Typhaeus typhoeus</i>	Minotaur Beetle	3	3	
<i>Aphodius fimetarius</i>		3	3	
<i>Aphodius prodromus</i>		1	1	
<i>Aphodius haemorrhoidalis</i>		1	1	
<i>Byrrhus pilula</i>	Pill Beetle	2	2	
<i>Stenagostus rhombeus</i>		1	2	
<i>Agriotes sputator</i>		3	4	
<i>Melanotus villosus</i>		1	1	
<i>Cantharis rustica</i>		1	1	
<i>Byturus ochraceus</i>		1	1	
<i>Harmonia axyridis</i>	Harlequin Ladybird	2	6	
<i>Adalia bipunctata</i>	2-spot Ladybird	1	1	
<i>Coccinella septempunctata</i>	7-spot Ladybird	4	13	
<i>Mycetophagus quadripustulatus</i>		1	1	
<i>Cylindrinotus laevioctostriatus</i>		3	3	
<i>Pyrochroa serraticornis</i>	Common Cardinal Beetle	1	1	
<i>Rhagium bifasciatum</i>		1	1	
<i>Chrysolina polita</i>		2	2	
<i>Lochmaea suturalis</i>	Heather Beetle	4	22	
<i>Galeruca tanaceti</i>		1	2	
<i>Platyrhinus resinosus</i>	Cramp-ball Fungus Weevil	1	1	Nb
<i>Phyllobius pomaceus</i>		1	1	
<i>Sitona lineatus</i>		1	1	

Species list for Snelmore Common 2010

Taxon	Vernacular	Records	Individuals	Status
<i>Agabus chalconatus</i>		1	1	Nb
<i>Carabus problematicus</i>		2	2	
<i>Leistus spinibarbis</i>		1	1	
<i>Nebria brevicollis</i>		1	1	
<i>Nebria salina</i>		2	2	
<i>Notiophilus biguttatus</i>		5	8	
<i>Notiophilus palustris</i>		1	1	
<i>Cicindela campestris</i>	Green Tiger Beetle	3	7	
<i>Elaphrus cupreus</i>		1	1	
<i>Bembidion guttula</i>		2	2	
<i>Bembidion lampros</i>		1	3	
<i>Bembidion dentellum</i>		1	10	
<i>Bembidion tetracolum</i>		1	1	
<i>Bembidion illigeri</i>		1	1	
<i>Bembidion doris</i>		1	11	
<i>Bembidion obtusum</i>		2	4	
<i>Poecilus cupreus</i>		1	1	
<i>Poecilus versicolor</i>		5	19	
<i>Pterostichus madidus</i>		2	2	
<i>Pterostichus niger</i>		1	1	
<i>Pterostichus diligens</i>		3	5	
<i>Oxypselaphus obscurus</i>		5	7	
<i>Agonum fuliginosum</i>		1	5	
<i>Agonum ericeti</i>		1	1	Nb
<i>Agonum sexpunctatum</i>		4	6	Na
<i>Platynus assimilis</i>		2	2	
<i>Amara familiaris</i>		1	1	
<i>Acupalpus dubius</i>		1	1	
<i>Syntomus foveatus</i>		1	1	
<i>Necrodes littoralis</i>		2	2	
<i>Silpha atrata</i>		3	3	
<i>Olophrum fuscum</i>		2	2	
<i>Scaphidium quadrimaculatum</i>		2	2	
<i>Staphylinus erythropterus</i>		1	1	
<i>Typhaeus typhoeus</i>	Minotaur Beetle	2	2	
<i>Aphodius fimetarius</i>		1	1	
<i>Aphodius prodromus</i>		1	1	
<i>Byrrhus pilula</i>	Pill Beetle	1	1	
<i>Stenagostus rhombeus</i>		1	1	
<i>Ampedus sanguinolentus</i>		1	2	Na

Melanotus villosus		2	3	
Halyzia sedecimguttata	Orange Ladybird	1	1	
Coccinella septempunctata	7-spot Ladybird	3	3	
Cylindrinotus laevioctostriatus		1	1	
Pyrochroa coccinea	Black-headed Cardinal Beetle	2	2	Nb
Rhagium bifasciatum		1	1	
Arhopalus rusticus		1	2	
Chrysolina polita		1	1	
Lochmaea suturalis	Heather Beetle	2	2	
Chaetocnema confusa		1	1	
Sitona lineatus		1	2	

Final note

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