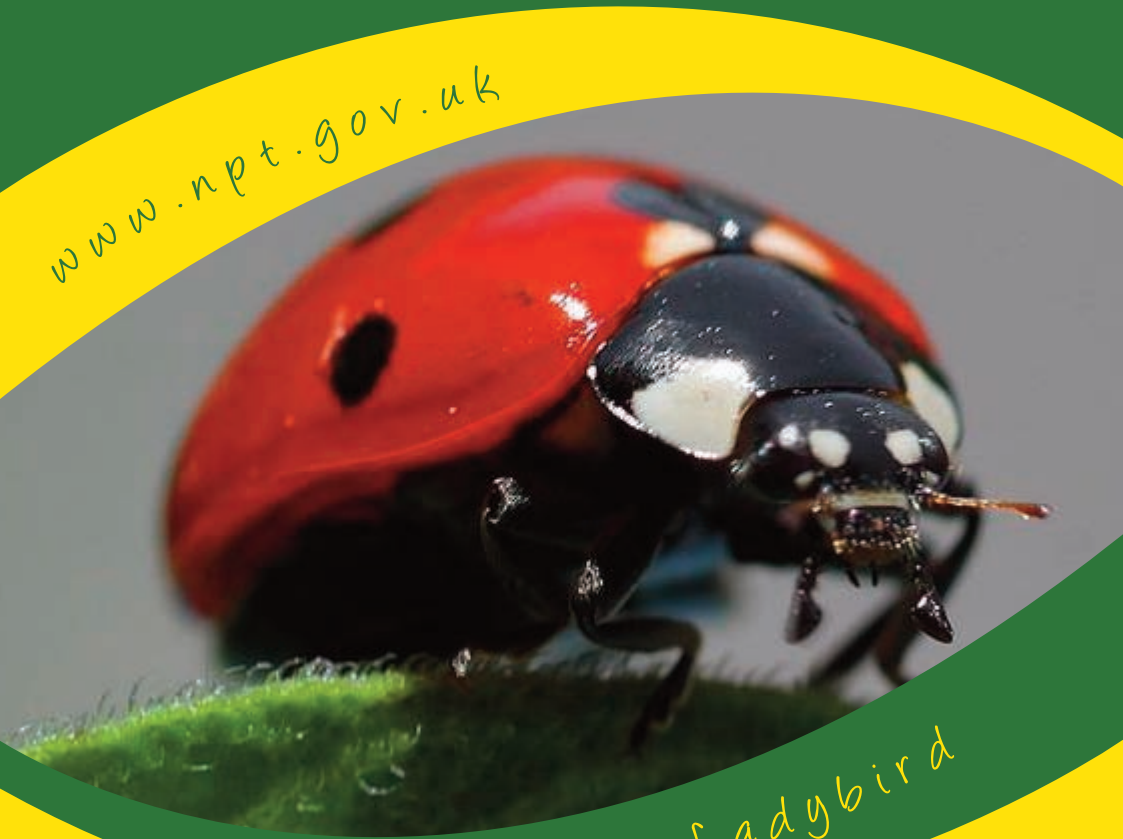


Mini Beasts

o n y o u r D o o r s t e p

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Ladybird

The County Borough is home to many wild animals, and not only our rich fauna of deer, foxes, badgers and birds. It is also home to animals we see much less often, despite them being there in their millions. These are the armies of **invertebrates**, the insects and other animals that have external skeletons, like shells, rather than internal bones.



Beetles...

There are more beetle species than of any other species group on the planet. Their main distinguishing feature is their **wing cases**, which are actually the front wings that have become toughened to protect the delicate hind wings.

Hunter Beetles

Tiger beetles are just as fierce and interesting as any big cat. If you go to the sand dunes at Crymlyn Burrows or around Port Talbot you may be lucky enough to spot the

Dune Tiger beetle (*Cicindela maritima*), or you may see

its cousin, the Green Tiger Beetle (*Cicindela campestris*),

in the heather clad hills. These

hunting beetles are able to run rapidly in the spring and early summer sunshine, and readily

take to flight. Their young, called larvae, live in

deep burrows, where they wait for passing insects,

pounce on them and drag them back to their lairs to

be eaten. They may catch ants, and even other beetles.



As well as common names, such as Green Tiger Beetle, all animals and plants have **scientific names** given to them when they are first discovered and described. These names are made up of two parts; first a generic name (e.g. *Cicindela*), which is the same for closely related animals (a bit like a family name), followed by a trivial name (e.g. *campestris*), which in combination with the generic name provides a name unique to the individual species. These scientific names are used internationally to avoid any confusion when talking about animals and plants.

Other fierce hunters are out there. In woods, especially along footpaths, you may see the Devil's Coach Horse (*Ocypus olens*). This strange looking beetle belongs to a family called the rove beetles. These beetles all have shortened wing cases, which give them greater flexibility to crawl under stones and between bits of leaves and twigs when searching for prey. Another rove beetle, *Aleochara fumata*, was recently found at Llandarcy in 2004. This is the first record of this species in Wales and not a lot is known about it, not even whether it eats the fungi near where it was found or other insect grubs.



Familiar Beetles

Ladybirds are perhaps the best known and loved of all our beetles, the gardener's friend, who eats greenfly and other aphids. You might think that the easily seen brightly coloured red wing cases with black spots are not a good idea when trying to hide from predators such as birds, but actually no. Ladybirds contain a chemical that is very distasteful to birds; once a bird has tried a ladybird, it won't try them again!

Surprisingly there are as many as 46 native British ladybird species. Actually, there are now 47 species in Britain, and the recent newcomer is not very welcome. The Harlequin Ladybird (*Harmonia axyridis*) arrived in Britain in summer 2004, and is spreading rapidly from the South East. The Harlequin threatens our native species by breeding more rapidly and eating the larvae of other ladybirds. This ladybird has not yet reached Neath Port Talbot, but it will, so keep a look out!



Its A Hard Life - Being Small...

Life is hard for small animals; they face predators wherever they turn. Imagine that you feel safe under a stone or hidden in the leaf litter on a woodland floor, when you come face to face with something fearsome. It could be a beetle like the Black Clock (*Pterostichus madidus*) or a foraging centipede.



Centipedes can be found in all sorts of places in the earth or on the ground, they have many legs (but not one hundred, as their name suggests!), with one pair under the head adapted as poison injecting fangs. Tropical centipedes can be poisonous to people; but ours are not because they are much smaller, but they are still very dangerous to small insects.



Centipedes Vs Millipedes



Centipedes can be easily distinguished from millipedes, the other group of invertebrates with very many legs, in a number of ways: Centipedes generally move much faster, have flattened bodies, one pair of legs per body segment and eat other invertebrates. Millipedes have rounded bodies, two pairs of legs per segment and they are harmless vegetarians.

Secret Cities...

If you go down to the woods in Skewen or Glynneath, to a south facing hillside, or if you turn over a stone, or probe a tree stump you may well find cities. Ant cities. Wood ants make large mounds, up to a metre high, where they live in large communities of many thousand individuals. Other ants have smaller nests, but still with large numbers living together as an ant society. They forage through their surroundings, and live and raise their young in the nests. The ants move their delicate larvae and pupae (ant eggs) to different places in the nest depending on whether it is hot or cold, wet or dry. The body heat of the active ants provides a central heating system to supplement warming from the sun, which helps keep the eggs warm.



Ant Facts

Most of the ants in the nest are worker ants; these are the wingless, sterile female children of the ant queens (fertile females). Males appear briefly in the summer when they and newly emerged fertile females fly to mate. After mating the new queens shed their wings and may go off to start their own communities, but the males die.

Mini Vegetarians...

All life on earth depends on energy from sunlight. Plants 'capture' the Sun's light energy and use it to make sugars; these sugars are used by the animals that eat the plants to grow and then by those animals that eat them! Insects are probably the most important **herbivores** (animals that only eat plants) on the planet. Many invertebrate herbivores are highly specialised, eating only a single plant.

A small metallic green leaf beetle, *Gastrophysa viridula* specialises in Dock leaves, and can leave the plants looking very ragged in May and June.



Horseshoe Bat.

One beetle which you may well see, perhaps on umbellifer flowers such as Wild

Carrot, is *Oedemera nobilis*, a bright metallic green beetle about 1 cm long. The males have hugely enlarged thighs, but they do not jump or run quickly, so they have no obvious function, but it is thought that females of this species like their mates to have fat legs!



Some invertebrate herbivores are regarded as pests; the Vine Weevil (*Otiorhynchus sulcatus*) for example is certainly not the fuchsia growers' favourite! Indeed it has been estimated that insect pests eat about a quarter of all food crops grown on earth.



Waste Disposal...

As well as feeding on dead plant material, Woodlice will also eat animal remains, fungi and dung, including their own (to not waste any nutrients).

Woodlouse



Woodlice Facts



Woodlice are peculiar animals. They are Crustaceans, related to crabs and lobsters, and prefer damp places. The 38 British Woodlice species are all very similar, all having flattened bodies and seven pairs of walking legs, but not all can roll themselves into a ball.

Waste disposal also includes getting rid of animal dung; without Dung beetles, for example, we would probably be waist high in the stuff! Dor beetles (*Geotrupes spiniger* and its relatives) are the largest British Dung beetles; they dig burrows under cowpats and prepare them for their larvae. The larvae of smaller Dung beetles, such as *Aphodius*, stay in the dung until they mature.

Dor Beetle



Not all insects attracted to dung feed off it. The Hornet Robber

Fly (*Asilus crabroniformis*) is attracted to newly deposited dung, particularly horse dung, to lay its eggs. Its young prey on the Dung beetle larvae. This fly is very striking, and is becoming quite rare. There is a large population on the western side of Crymlyn Bog, and individuals are sometimes seen in the Llandarcy area.

Hornet Robber Fly



Aquatic Invertebrates...

Wetlands are fast disappearing throughout Britain, where land has been drained for development or agriculture and due to natural processes. In Neath Port Talbot we are fortunate to have internationally important wetlands such as Crymlyn Bog and Pant y Sais Fen, which are legally protected.

In 2003 a remarkable discovery was made in Neath Port Talbot. A population of the Fen Raft Spider (*Dolomedes plantarius*) was found on the banks of the Tennant Canal at Pant y Sais Fen near Jersey Marine. This spider is very rare and is found in only two other places in the UK. This spider has since been found further up the canal and in Crymlyn Bog. This large spider sits on a small web near the water surface, waiting for insects, tadpoles and even small fish to catch for food. The female cares for the young spiderlings by guarding a special nursery web and allowing them to feed between her front legs. The female tolerates the spiderlings for a time, but soon they have to fend for themselves, otherwise they could end up as her lunch!



The surface of the canal is also the hunting ground for Whirligig beetles (*Gyrinus*), which can often be seen whizzing around on sunny days. These little boat shaped animals have long front legs to grab their prey and paddle shaped middle and hind legs to speed them through the water. Relative to their size they are faster than any speedboat! Many other beetles live in water, hunting for insects, tadpoles and fish amongst the water weeds and the bottom sediment. *Acilius sulcatus* is another common water beetle.



Water beetles have evolved from terrestrial ancestors, and need air to survive. When they dive they take a bubble of air with them, either under their wing cases or trapped in a layer of fine hairs, which gives them a silvery appearance.



In wetlands, you will often see a large heavy fly, particularly along hawthorn hedges in the early spring. This is the St. Mark's Fly (*Bibio marci*), so named because it always appears in time for St. Mark's Day, 25th April.



The banks of ponds and canals also have special water loving species such as dragonflies and damselflies, which are capable of amazing aeronautics to catch other insects in flight. We have about 20 dragonfly species, living in and around ponds in the upland areas, rivers, fens, bogs and canals of Neath Port Talbot.



The attractive Blue Variable damselfly (*Coenagrion pulchellum*) is common at Pant y Sais, and the Migrant Hawker (*Aeshna mixta*) often visits ponds throughout the County Borough.



Beach Lovers...

Sand dunes and beaches are great places to enjoy during the summer, and they also have their own special fauna.



The little Dune Chafer (*Aegialia arenaria*) is common on our dunes, where it feeds on plant debris and decaying seaweed.



Dicheirotichus gustavi, a little ground beetle with a big name hunts for small creatures on the sand and under seaweed; its yellow and black body provides perfect camouflage against the sand.



A rather plump looking weevil, *Philopeton plagiatum*, is equally hard to spot, whilst other beetles such as *Phylan gibbus* either come out at night or bury themselves in the sand, moving through it with a swimming like motion.



Invertebrates Closer to Home...

Gardens provide important habitat and food sources for wildlife and they give us all the opportunity to take time to observe the wildlife at our leisure;

common sights are bees and other insects visiting flowers, and hover flies mimicking bees, or spiders, such as the orb weavers (*Araneus diadematus*), making their large webs to catch flies.

Many woodland and grassland species find their way into gardens if the conditions are right. Leaving some grass uncut for a time might encourage grasshoppers to visit or take up residence.

It is easy to make gardens more wildlife friendly, and more enjoyable and interesting places. Many people feed birds, so why not help to feed the insects.

Bumblebees, in particular, use a lot of energy flying from flower to flower and so they need a lot of nectar to have enough left over to feed their young. There are 23 British bumblebee species, 15 of these have been recorded in Neath Port Talbot. Bumblebees are becoming increasingly threatened, some of which are very scarce or endangered in Britain, such as the Shril Carder Bee (*Bombus sylvarum*), which has been recorded near Margam.



When you're next in the garden, think of how you might be able to help bees and other insects to survive by growing plants that provide lots of nectar and other foods, such as heathers, lavender, thyme, daisies and holly.



You could also provide nesting sites for insects. Solitary bees often nest in small tunnels and will readily nest in hollow bamboo or the special tubes marketed by some companies. Leaf litter or a pile of dead wood can provide shelter, and a garden pond will allow a much greater variety of insects to breed.



And don't be too quick to clear out all of the wild flowers - to us they may be weeds, but to many insects they may be lunch or home.

What is it? Identification Guide

Legless

segmented **Worms** (Annelida)
 unsegmented **Round Worms** (Nematoda)



Slugs & Snails (Mollusca)

Many Legs

Woodlice
(Isopoda)



Flattened
2 legs per
segment
Centipedes

Rounded
4 legs per
segment
Millipedes

8 Legs

Spiders
(Araneae)
body - 2 parts



Harvestmen
(Opiliones)
body - 1 part



6 Legs (Insects)

Wingless

2 wings

Flies, gnats
(Diptera)



Ants

(Formicidae,
Hymenoptera)



Collembola



4 wings

Dragonflies
(Odonata)



Fleas

(Siphonaptera)



Mayflies

(Ephemeroptera)



Grasshoppers

(Orthoptera)



Cockroaches

(Blattodea)



Earwigs

(Dermaptera)



Bugs

(Hemiptera)

Piercing, Sucking
mouthparts



Butterflies & moths

(Lepidoptera) Wings with
coloured scales



Bees, ants, wasps, sawflies

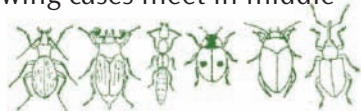
(Hymenoptera)

Often with distinctive waist



Beetles

(Coleoptera)
wing cases meet in middle



We hope that this booklet has inspired you to look out for some of the invertebrates in our County and beyond.

If you have had your interest kindled and would like to find out more, you have several options:

- 1** If you want to find out more about insects or other invertebrate groups you could join a society of enthusiasts such as:
The Wildlife Trust of South and West Wales
www.wildlifetrust.org.uk/wtsww/ Tel. 01656 724100
Amateur Entomological Society (which has links with many specialist groups, such as the Dipterists Forum, and the Coleopterists Group) www.projects.ex.ac.uk/bugclub/aes.html
Butterfly Conservation www.butterfly-conservation.org Tel: 0870 7706153
Buglife <http://www.buglife.org.uk/> Tel: 01733 201210
- 2** You might fancy becoming a conservation volunteer. There are several local groups keen to improve the environment for invertebrates and all wildlife. If you would like further information contact Neath Port Talbot CBC on 01639 763333.
- 3** If you want to read more about insects there are many excellent books, magazines and web sites - try your local library.
- 4** If you would like to entice insects to your garden why not request a 'Go wild in your garden leaflet' from Neath Port Talbot CBC on 01639 763333

The Neath Port Talbot Biodiversity Forum is a group of organisations, local wildlife experts and volunteer groups that work to conserve the special plants and animals of our county. Their Local Biodiversity Action plan is available on the Council's Website and in local libraries. They organise walks, talks and volunteer work parties locally.



Author: Steve Bolchover

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