

RANGER'S
NOTEBOOK



Wildlife thoughts from a Ranger's Notebook

Working on Box Hill I am very lucky to come across a wide range of lovely animals and plants.
Here are some thoughts and notes from these encounters.

Box Hill Ranger

Chalk grassland

My job as a Box Hill Ranger is to look after the chalk grassland.

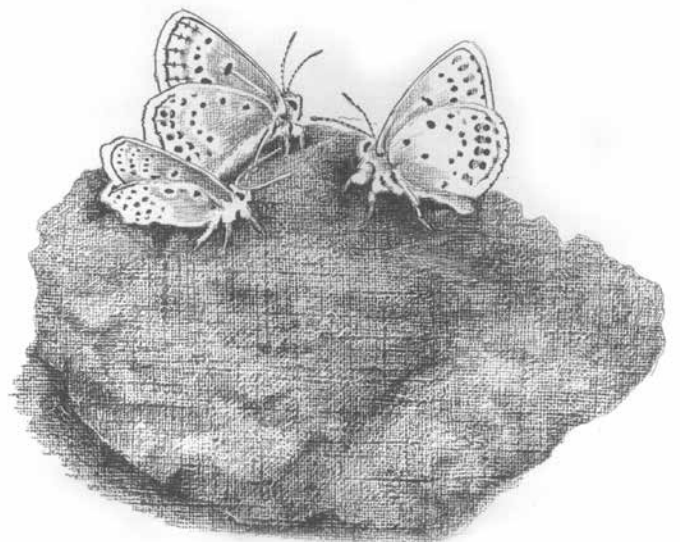
Left alone it would return to woodland and Box Hill would become a very different place.

We would lose our stunning views and the wonderful plants and animals that need this special habitat.



The best way to protect chalk downland habitat is to eat it. This is where the Belted Galloway Cattle come in. They winter graze the tough coarse grasses that outcompete the delicate grassland flowers.

The hooves of these heavy animals also create some bare ground for these flowers' seeds to germinate in. They will also eat some of the scrub. Don't go too near a Belted Galloway or you might get a pat on the head!



Kestrel



walking in the Zig Zag valley or above the slopes east of the viewpoint I often see a Kestrel hovering above the grassland.

The Kestrel hovers to keep its head completely still so it can locate small mammals such as field voles in the grass below. Kestrels depend on field voles to feed their young. When voles have a good year so do kestrels.

Windhover is another name for this bird that hovers with such amazing flight control. You can identify it easily as it is the only small bird of prey that hovers.

How do you tell a field vole from a bank vole? The clue is in the tail. A field vole's tail is shorter - roughly a $\frac{1}{3}$ of the body length whereas a bank vole's tail is nearly $\frac{1}{2}$ the length of its body.



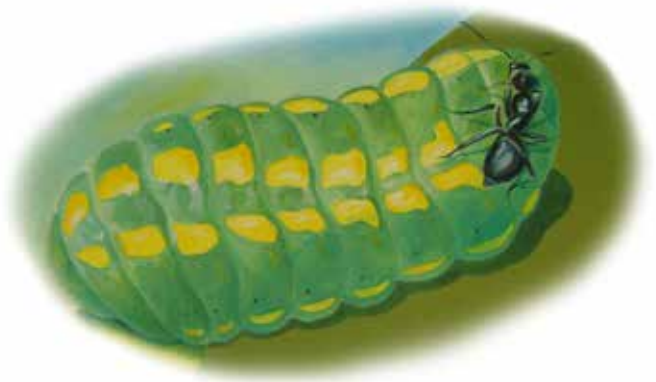
Adonis Blue Butterfly

This is my favourite butterfly.
The male butterfly is stunning
with brilliant sky blue wings.
The white edge of its wings
is broken by little black
lines and that is how
you can tell them
from the male
Common Blue
butterfly.



Amazingly the caterpillars have
ants to look after them. The ants stay
with them during the day helping to
protect them from being eaten. In
the evening they take them into their
ant hills and in the morning pick
them up and place them on the right
foodplant. What do the ants get in
return? The caterpillars exude a milky
substance which young ants love to
eat. They protect them so they can
"milk" them.

The Adonis Blue caterpillar eats
only one type of plant - the yellow
Horseshoe vetch. The female Adonis
Blue lays her eggs on this plant
and then leaves them to fend for
themselves.



Blue Butterflies

I keep being asked how you tell our beautiful blue butterflies apart. It's not easy but hopefully these sketches of the males will help.

The females are even more tricky....

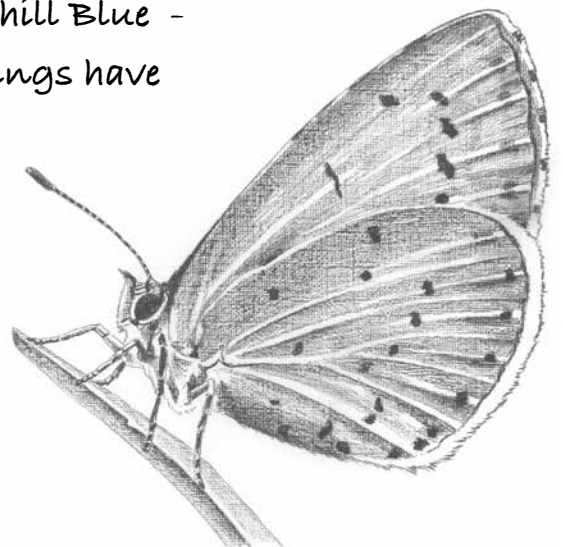
Common Blues vs Adonis Blue
- similar size but Adonis Blue (shown here) has black lines that cross the white wing fringes. The Adonis Blue is a stunning sky blue.



Chalkhill Blues are larger than Adonis Blue's and Common Blues and also have chequered wing fringes. I think the blue of the males is lighter and slightly more chalky.



Common Blue vs Chalkhill Blue -
The undersides of the wings have very different patterns.



Rabbits

I am really pleased to still see rabbits in the Zig Zag valley, as they are being affected by diseases and are not doing very well in much of the UK.

Rabbits help with grazing our grassland.



Rabbits can give birth any time from February through to August. If the weather and food are good female rabbits can breed at just four months old. Litters of between three and seven pups can be born every five or six weeks, - hence the phrase "breeding like rabbits".

Bee Orchid



It's June and the gorgeous Bee Orchids are out.

This Bee Orchid is a naughty mimic.

To attract bees that will pollinate it, the flower's velvety lips look like a female bee.

The male bee is attracted to the fake female and tries to mate with it.

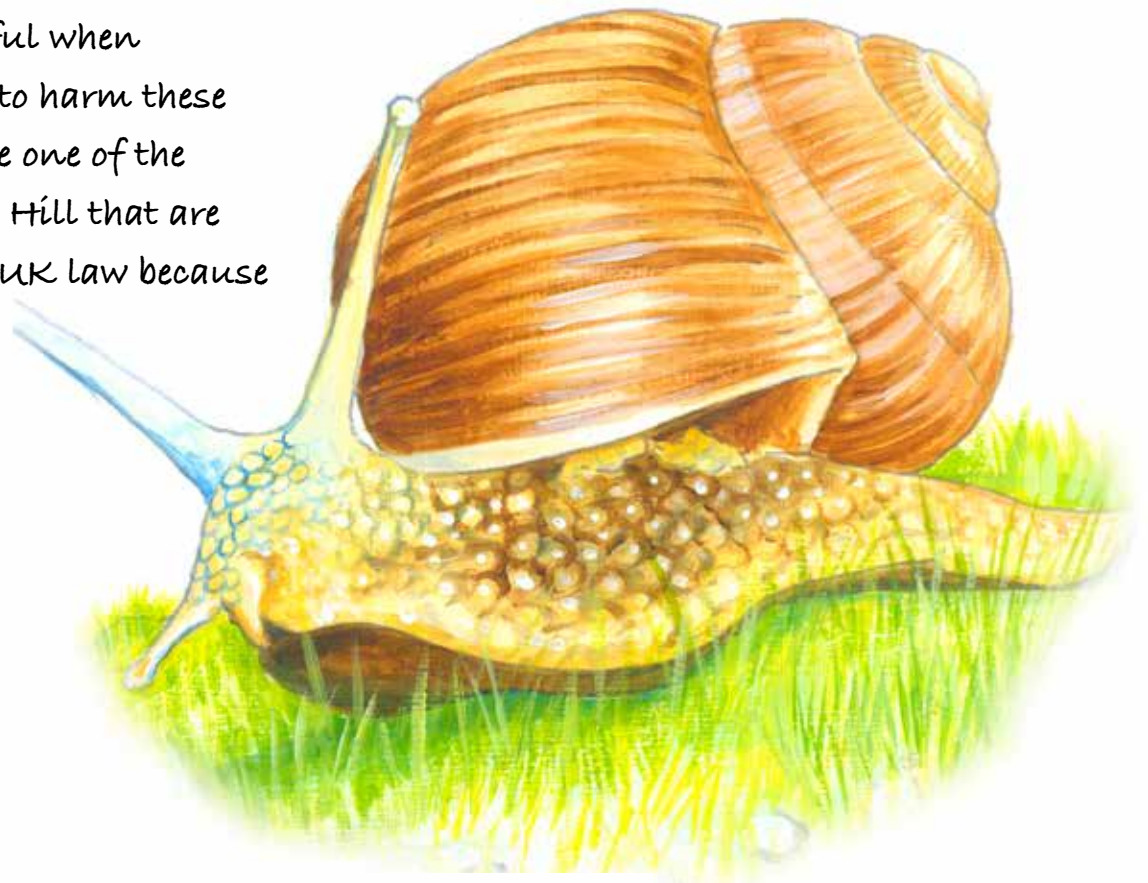
The bee ends up with pollen stuck to his legs which he carries off to the next plant.

Although there is a species of bee that actively pollinates these orchids in the Mediterranean, our orchids have to pollinate themselves. Box Hill bees are not so easily fooled.

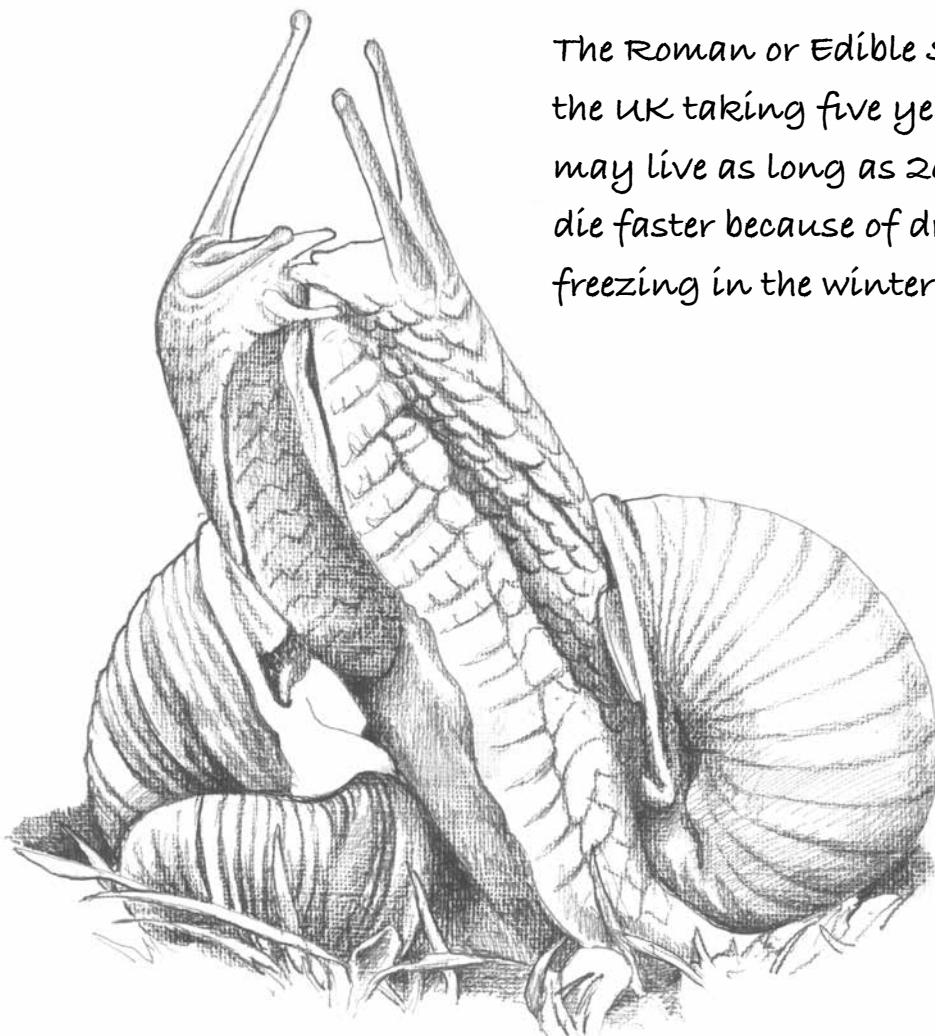


ROMAN SNAIL

I have to be careful when strimming not to harm these snails. They are one of the animals on Box Hill that are protected under UK law because there are not many left.

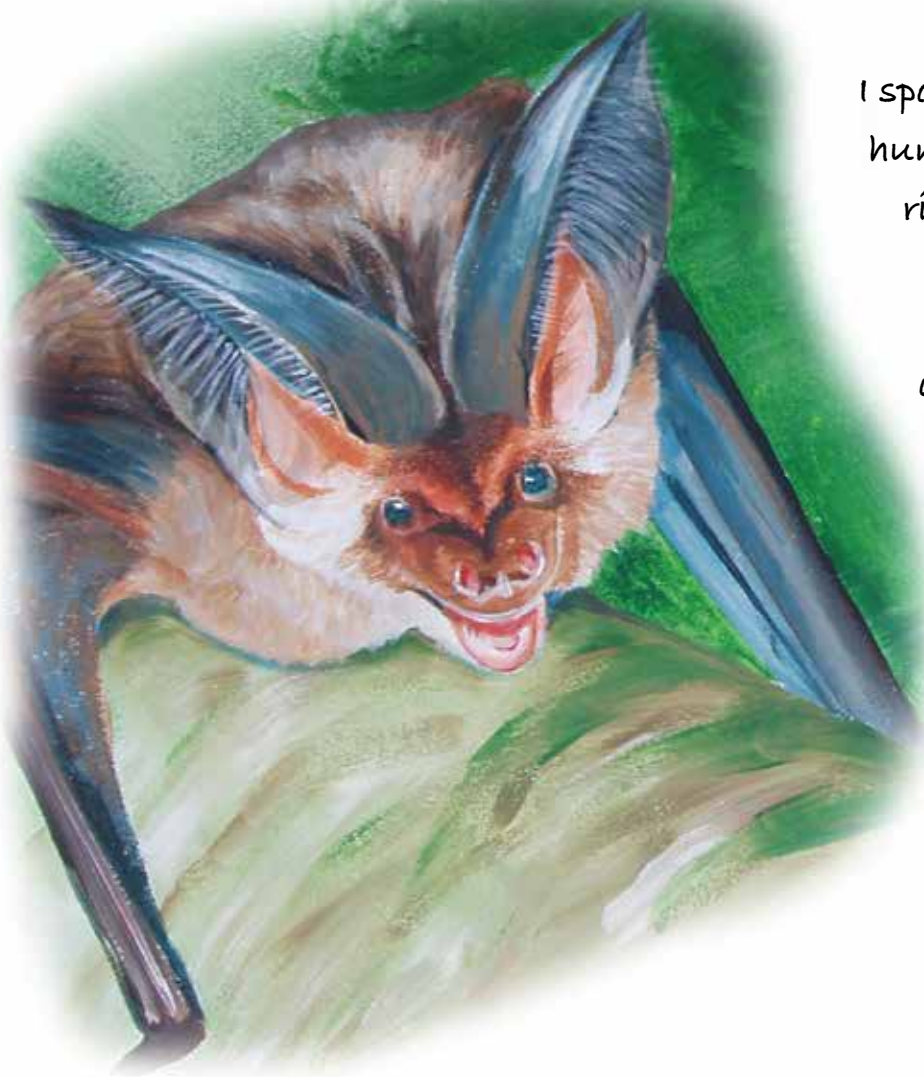


The Roman or Edible Snail is the largest snail in the UK taking five years to grow to maturity and may live as long as 20 years. Sadly they often die faster because of drying in the summer and freezing in the winter.



In late spring you can see the snails performing an intricate 'courtship dance' entwined and swaying slowly side from side to side as they mate.

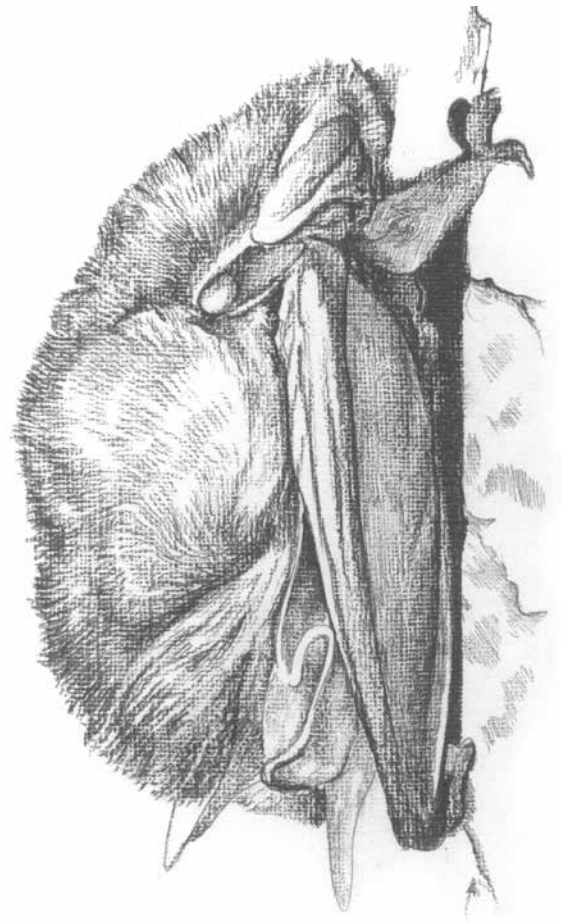
Brown long-eared bat



I spotted a brown long-eared bat hunting in the woods above the river last night. They are not uncommon on Box Hill, but like all bats they are difficult to see as they don't come out until dusk. The long-eared bat lives up to its name as its ears are nearly as long as its body!

They use their ears as well as eyes to 'see' the world around them. An extra sense called echolocation enables bats to hunt by bouncing sound waves off potential prey.

Brown long-eared bats have an extraordinary way to protect their ears during hibernation. They are folded down into rams-horn shapes whilst the bat is at rest, but before hibernating it carefully tucks each ear under a wing. Soooooo cute!



DORMOUSE

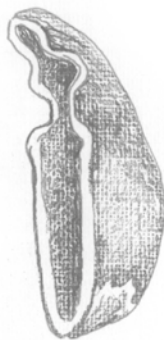
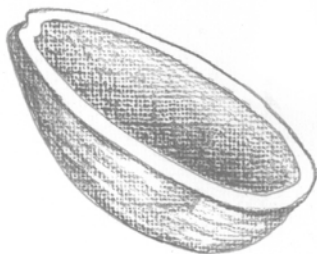
I first learned about the Dormouse when I read Alice in Wonderland. The Dormouse is the one that sleeps in a teapot.

Dormice hibernate from as early as September through to May. When they are active they come out at night and sleep in a nest during the day.

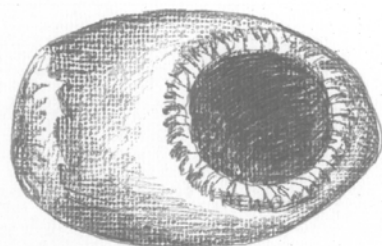
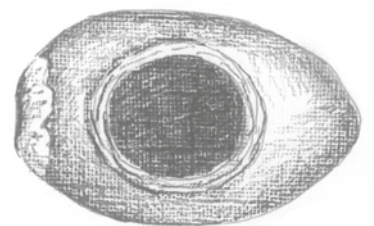
I can tell when Dormice are around because of the way they open and eat hazel nuts.



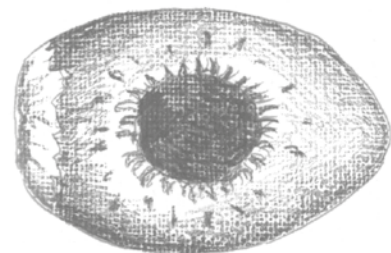
Grey Squirrel -
split into two halves



Hazel Dormouse -
Small smooth
edged hole on
one side



Bank vole -
opened neatly
with tooth marks
on inner rim



Wood Mouse -
small hole with obvious
tooth marks

Great Spotted Woodpecker

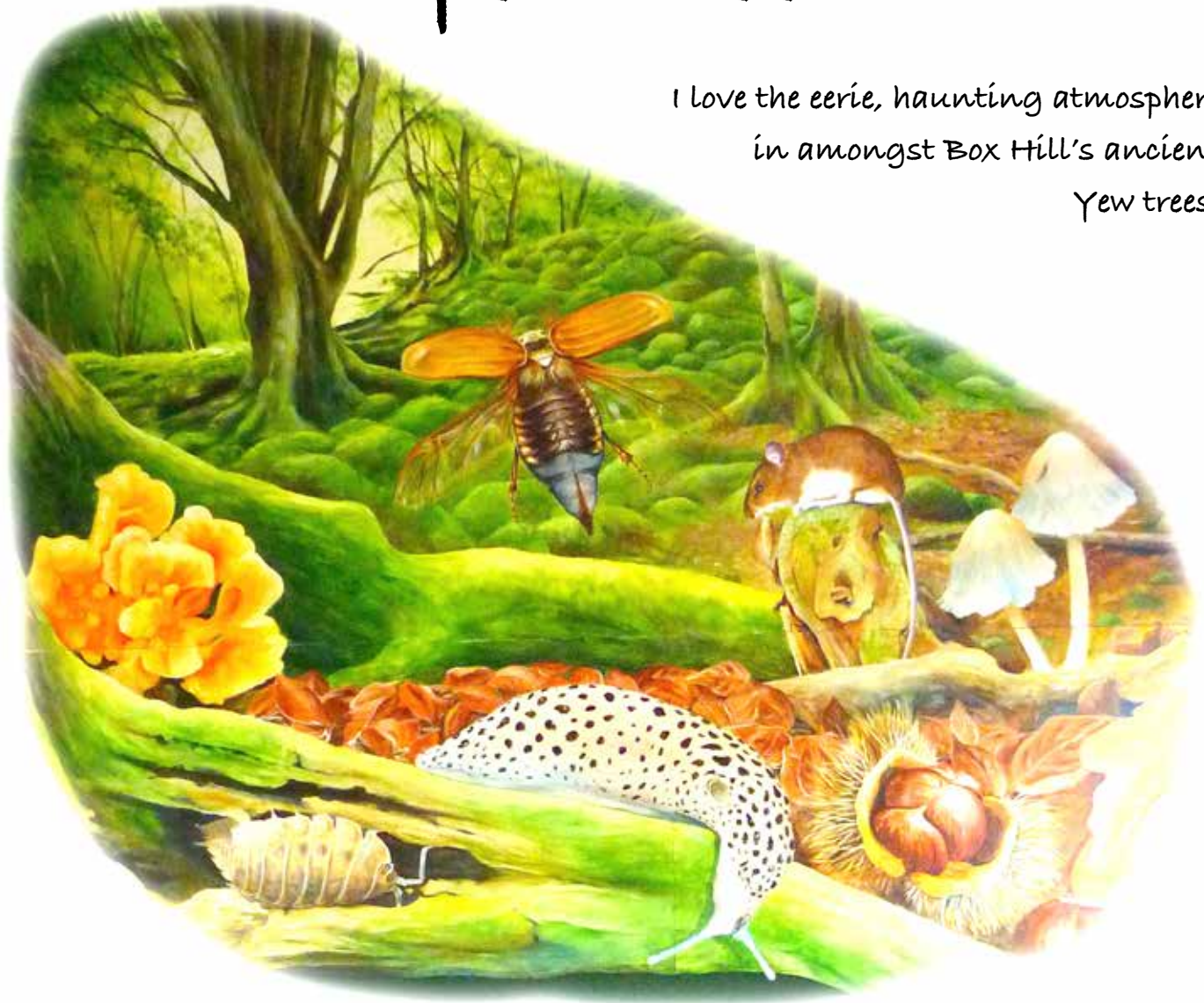


This drumming can sometimes be heard over half a mile away so it has to be delivered with great force as well as speed. His powerful neck muscles and spongy padding around the base of its bill act like shock absorbers on a car, preventing him getting a headache!

I can tell spring is nearly with us - I heard the drumming of the Great Spotted Woodpecker today. This sound has the same function as birdsong - to deter rivals and attract a mate. The male bird batters his sharp pointed bill against a branch or tree trunk up to 40 times a second!

Yew tree

I love the eerie, haunting atmosphere
in amongst Box Hill's ancient
Yew trees.



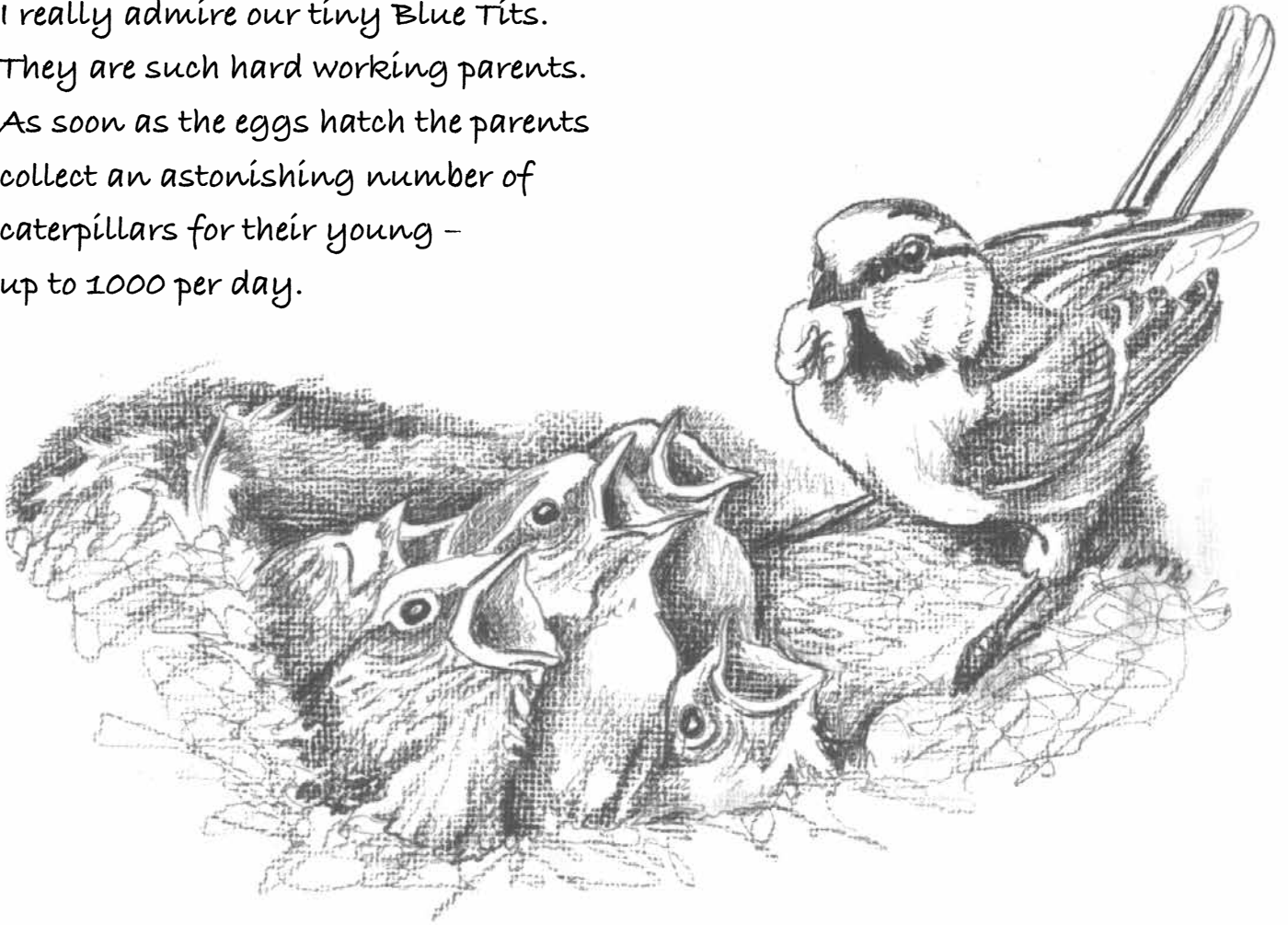
The oldest tree, and indeed the oldest living thing
in Britain is a Yew tree. It is found in Fortingall
in Scotland and is estimated to be between 2000 and
5000 years old. Box Hill's trees are not as old as this
but some may be as old as 300 or 400 years.

Most parts of the yew are very poisonous,
especially to horses and cattle. Unusually the
fleshy red part of the berries are not poisonous, and
thrushes and finches will feed up on these
for the winter, with the seeds passing through them
allowing the yew tree to spread further away.



Blue Tit

I really admire our tiny Blue Tits. They are such hard working parents. As soon as the eggs hatch the parents collect an astonishing number of caterpillars for their young - up to 1000 per day.



In total Blue tits collect 15,000 flies and caterpillars for their offspring before they become ready to leave the nest at the age of three weeks!



Blue Tits eat a lot of yellow green caterpillars in the breeding season. This increases the intensity of the yellow colour of the males. The male with the yellower breast has a greater chance of finding a partner because yellow breasts show that the male can provide a good amount of food for the offspring.

Green Woodpecker



I see lots of Green Woodpeckers out on the grassland. They spend much of the time probing grass for their main food - ants. They flick their long sticky tongues into ant hills and take them out coated in insects.

Unlike the Great Spotted woodpeckers, Green woodpeckers hardly ever drum. They use a loud laughing call to warn off rivals. This maniacal sound gave the Green Woodpecker its old country name of 'yaffle'. Another folk name is 'rain bird' as its call is supposed to be followed by showers.



You can often find pellets of chalky white and brown Green Woodpecker poo near anthills, and when you break this open it is full of bits of ants.

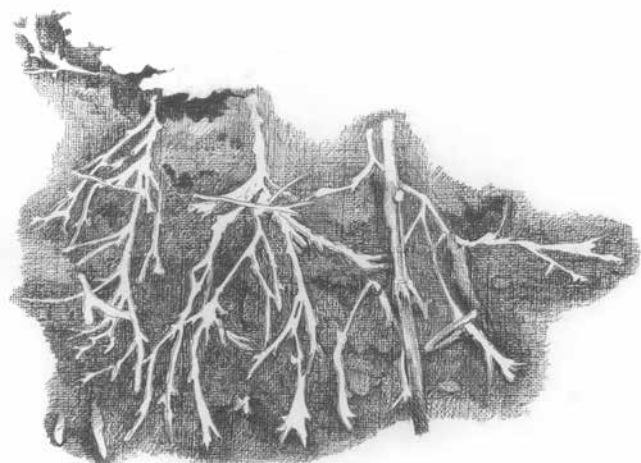
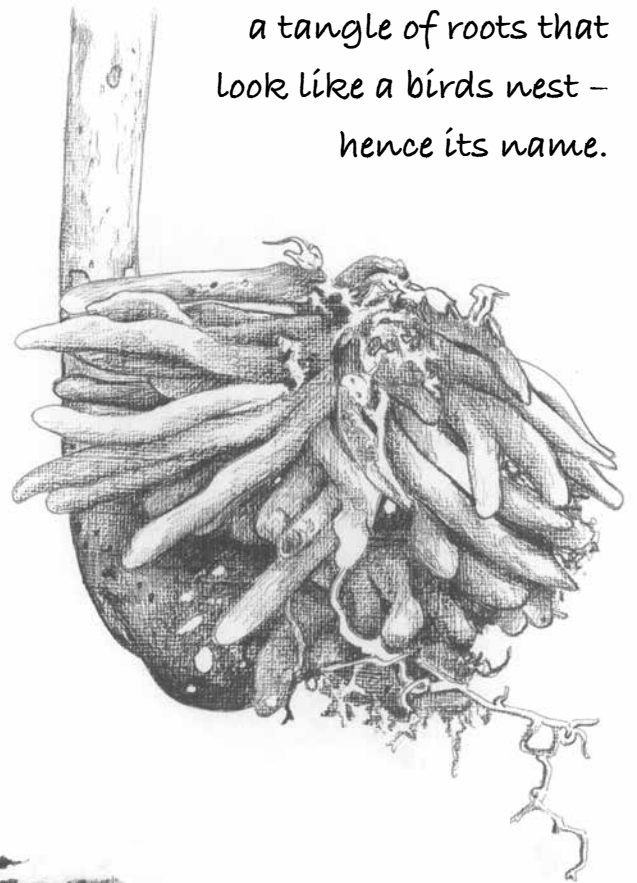
Bird's Nest Orchid

The Bird's-nest Orchid is perhaps not as obviously beautiful as many of the other orchids on Box Hill - but I like it. It is a strange, dirty straw coloured orchid found growing in deep shade often under beech trees.

The Bird's Nest Orchid has a rhizome i.e. a stem that grows horizontally under the ground, and this produces a tangle of roots that look like a bird's nest - hence its name.



The Bird's-nest Orchid could not survive at all without its fungal partner to provide food, as it lives in the shade and cannot photosynthesize. It is now thought likely that the beech tree roots also provide food to the orchid via the fungal threads in what is called a tripartite relationship. How clever is that!



Tawny Owl

I find the song of the of the Tawny Owl uplifting, but it is used in countless TV series to evoke an atmosphere of spooky nights. The twit - twoo call is in fact a love duet. The girls say twit and the boys say twoo.



The Tawny Owls duet commences early in the new year and informs any nearby owls that this territory is occupied by a breeding pair. They need to do this because Tawny Owls rarely move more than about a kilometre from where they were born. Last year's youngsters will want to muscle in on their parents' territory. By calling throughout the night the residents are establishing their right to remain there.

Roe Deer

Just saw a mum and two young Roe Deer in the woods.

I can tell they were Roe Deer as they had a distinctive pale rump that is very obvious when they are running away - which is the most likely way you will see them on Box Hill.



They don't really run, they jump away from you on spring loaded legs. This unusual behaviour is called stotting, from a Scots term meaning "walk with a bounce".

The males have short antlers up to 30 cm long with just three points. They shed their antlers in November unlike other deer which do this in spring.

Roe Deer are elegant, goat sized deer with short antlers and no tail. They have plain, reddish brown coats in summer which becomes darker grey brown after they moult in October.

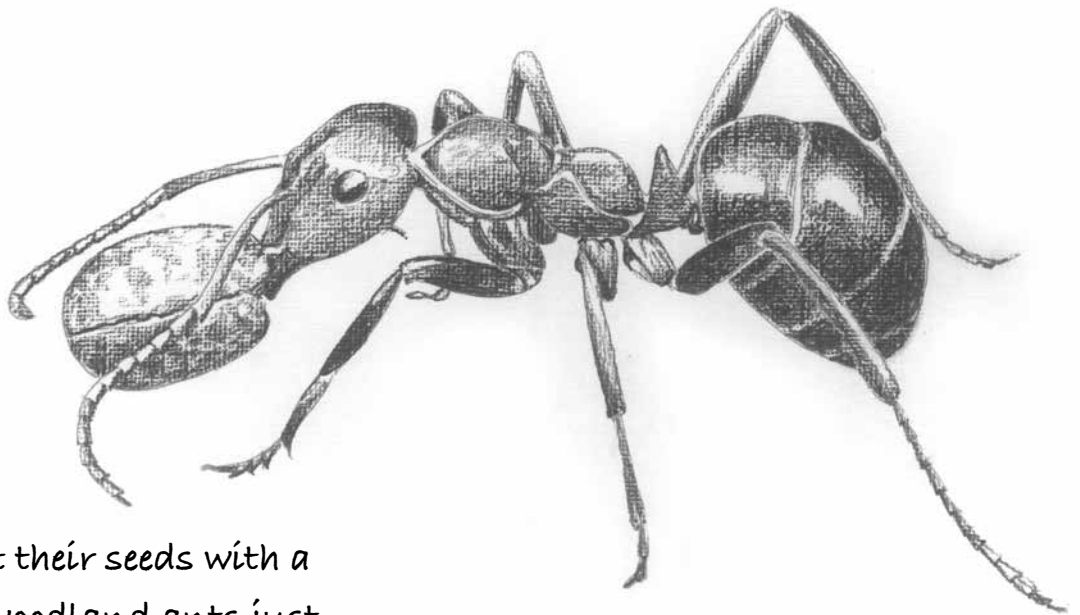


BOX



Box Hill is named after our box trees.
They are now very rare in the UK
in the wild.

I think that Box trees are rather crafty.
They release a poison into the soil around them,
to prevent their offspring growing too close and
competing with them in the future.



However they coat their seeds with a
waxy layer that woodland ants just
love to eat. The ants pick the seeds
up and carry them off to their home
where they scrape the wax off before
throwing them away.

The seeds then have a chance to grow
into a new Box tree- far away from
their poisonous parent.

Bluebell



My spirits were lifted today by the sight of a carpet of bluebells on the woodland floor by the track from the Donkey Green to Juniper Top. The glorious blue colour combined with the pervading sweet scent is an unmissable treat that shows that spring has well and truly arrived.

Although this sight is fairly common across much of Britain, globally the Bluebell is quite scarce. We support over half of the world's population of this delightful flower.

This much loved wild flower has a wide range of folk names including, fairy bells, wild hyacinth, wood bell, fairy thimble, granfer griggles and blue bottle.



Shield Bug



Shield Bugs are called stink bugs in the USA. They do let off a pungent aroma which is used to deter predators and also if handled.

However I think they are a very pretty insect that doesn't deserve this somewhat insulting name. They are easy to identify because of their shield shape, hence the UK name.

Most shield bugs start October green and end it in various shades of brown. This is the colour they adopt for camouflage throughout the winter. In spring they return to their emerald colour to match the sprouting greenery.



Blackberry

Mmmm my favourite - Blackberries. Our volunteers remove most brambles from the chalk grassland to preserve this species rich habitat. However you will see some clumps that are left to provide shelter for overwintering insects and small mammals, as well as berries for birds... and a treat for us.



The blackberry grows in a thicket
Of thorns - any finger; they'll prick it
But tastes so inviting
I long to start biting,
And scramble through brambles to pick it.

Rory Ewins

Badger

I often see badgers crossing the Box Hill road at night. Shockingly around 50,000 badgers a year are killed on UK roads.



Badgers live together in social groups of two dozen or so adults and fight each other for their place in the hierarchy, often by biting each other's bottoms! This creates a spinning, growling fight as each badger tries to bite the other one's bottom, while spinning round so he doesn't get bitten himself.

Smell is also very important in badgers social lives. The dominant male will rub his smell all over other badgers in his social group. It brings a whole new meaning to the expression "rubbing your face in it".

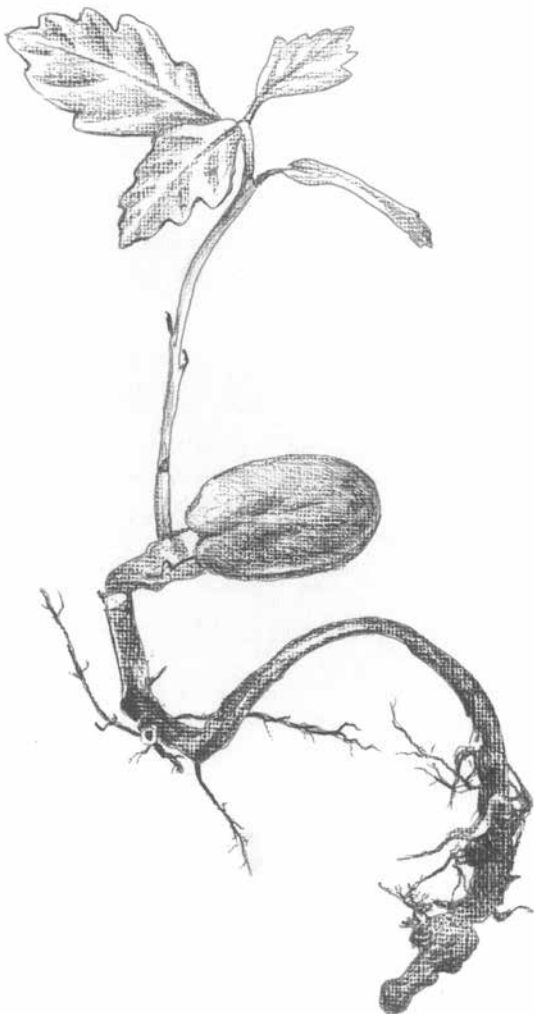


Jay

I notice that jays become much more conspicuous in September and October and regularly see them flying between trees with their beaks full of acorns.

There are far too many acorns produced for the jay to eat so it buries them in underground stores or caches for the winter.

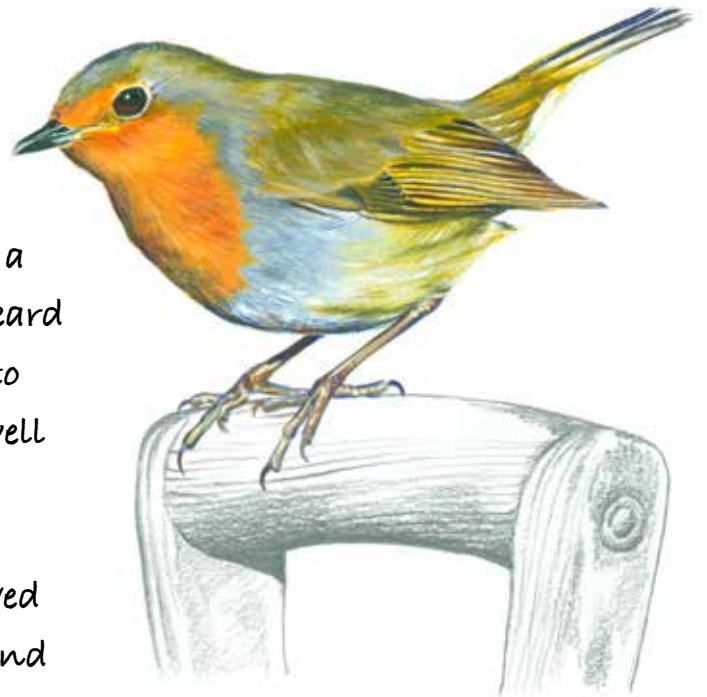
One study has shown that a single bird hid about 5000 acorns each day!



The jay is very colourful shy bird, but its call is a harsh screech that pierces Box Hill's woodlands. In Wales it is known as "the screamer of the woods".

Robin

I love robins, they have such a trusting nature. They follow me around when working in the woods waiting for worms to be unearthed. On top of this they have a beautiful song and one of the very few heard in winter. Unusually the female sings to defend her own territory in autumn as well as the male.



However there is a darker side to our beloved robins. They are unusually aggressive and defend their territories vigorously, which can result in serious injuries and sometimes death. These fights can break out all year round.



So, when I see this Robin now,
Like a red apple on the bough,
And question why he seems so strong,
For love, or for the love of song;
Oh, now they comes this thought unkind,
Born of the knowledge in my mind:
He sings in triumph that last night
He killed his father in a fight.

W.H.Davies (The Truth)

Orange Ladybird



Ladybird! Ladybird! Fly away home,
Night is approaching, and sunset is come:
The herons are flown to their trees by the Hall;
Felt, but unseen, the damp dewdrops fall.
This is the close of a still summer day;
Ladybird! Ladybird! Haste! Fly away!

A verse from Emily Brontë's retelling of the nursery rhyme

I find myself reciting this poem whenever I see a Ladybird. The orange ladybird is an easy one to identify as it is pale orange with 12 to 16 cream spots on its wing cases. It feeds on mildew on trees, particularly ash and sycamore, and hibernates in the leaf litter.



Southern Hawker Dragonfly

I watched a large, beautiful Southern Hawker Dragonflies patrolling his stretch of the river Mole today. It was worth the wait to see their attractive coupling.

Dragonflies have a very romantic looking mating. They start by flying together, with the male holding onto the female's head or neck using the claspers on his tail.

When it comes to time to mate, they curve round their abdomens, so there two bodies together form a heart shape. Aaaaah....

This charming mating can last from just a few seconds to up to six hours. After the romance of their courtship, they may go their separate ways possibly never meeting again.



Banded Demoiselle Damselfly

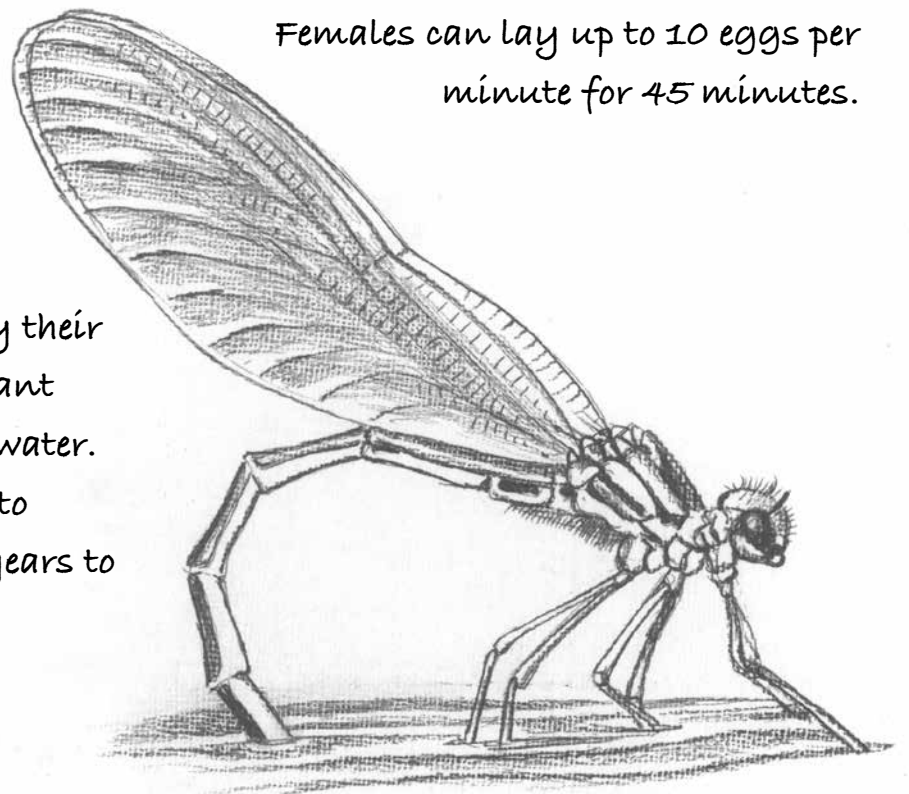


I've watched lots of Banded Demoiselles giving fluttering display flights by the edge of the river. They are very beautiful.

The males are metallic blue, with a distinctive dark band or 'fingerprint' mark across their wings, and the females are a shiny green.

Females can lay up to 10 eggs per minute for 45 minutes.

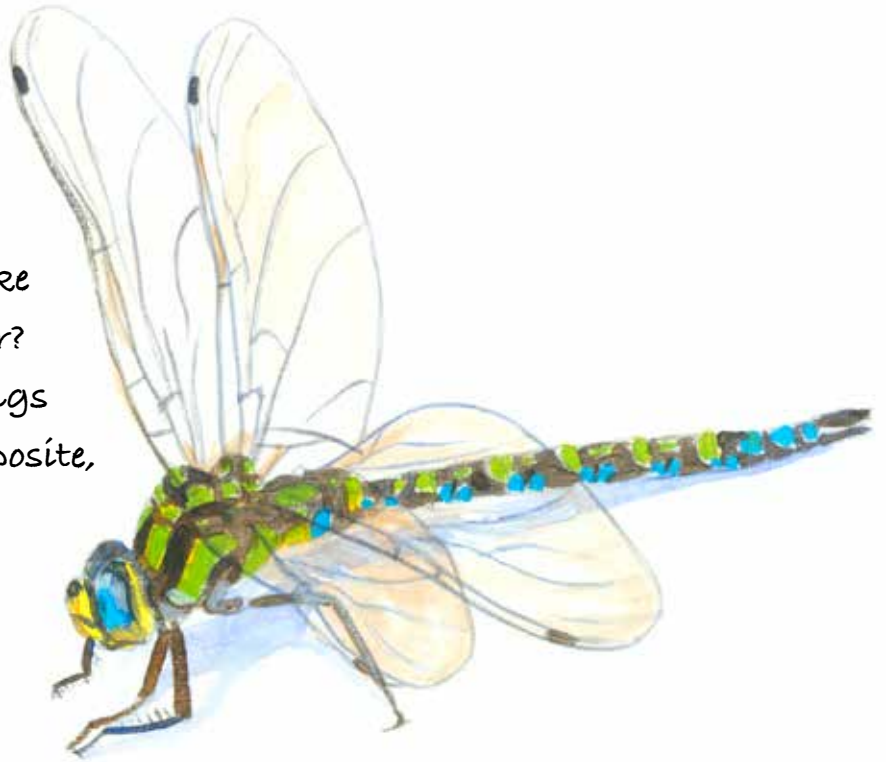
Female Banded Demoiselles lay their eggs by injecting them into plant stems under the surface of the water. The eggs take about two weeks to hatch and the larvae take two years to develop.



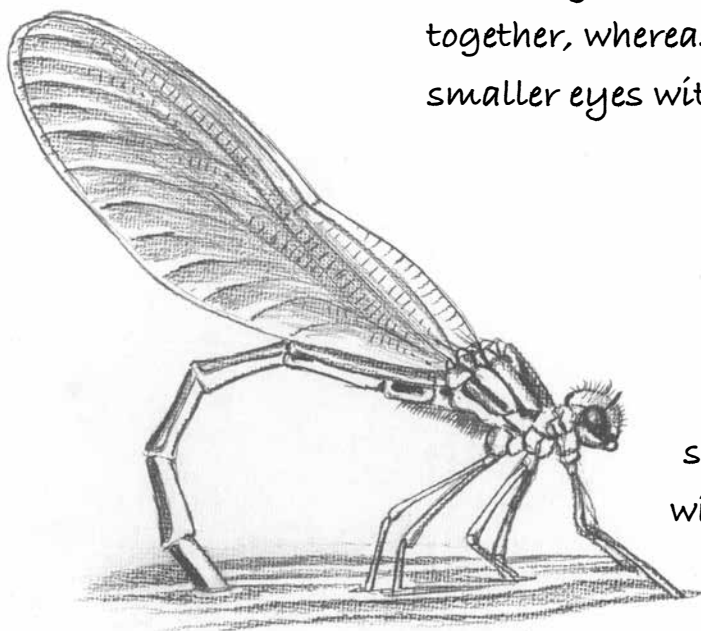
Dragonfly or Damselfly?

Someone asked me how to tell a Dragonfly from a Damselfly today, so here is how I do it.

Look at their wings when they are resting. Are they spread like an aeroplane, or closed together? Damselflies rest with their wings closed, and dragonflies the opposite, so this is a big give away!



How close together are their eyes? If you can get near them, dragonflies have very large eyes that are close together, whereas damselflies have, smaller eyes with a gap in between.



Are they chunky or are they twig-like? Dragonflies have much chunkier and short bodies, and damsels are the opposite with an extremely long and narrow body.

Grass Snake

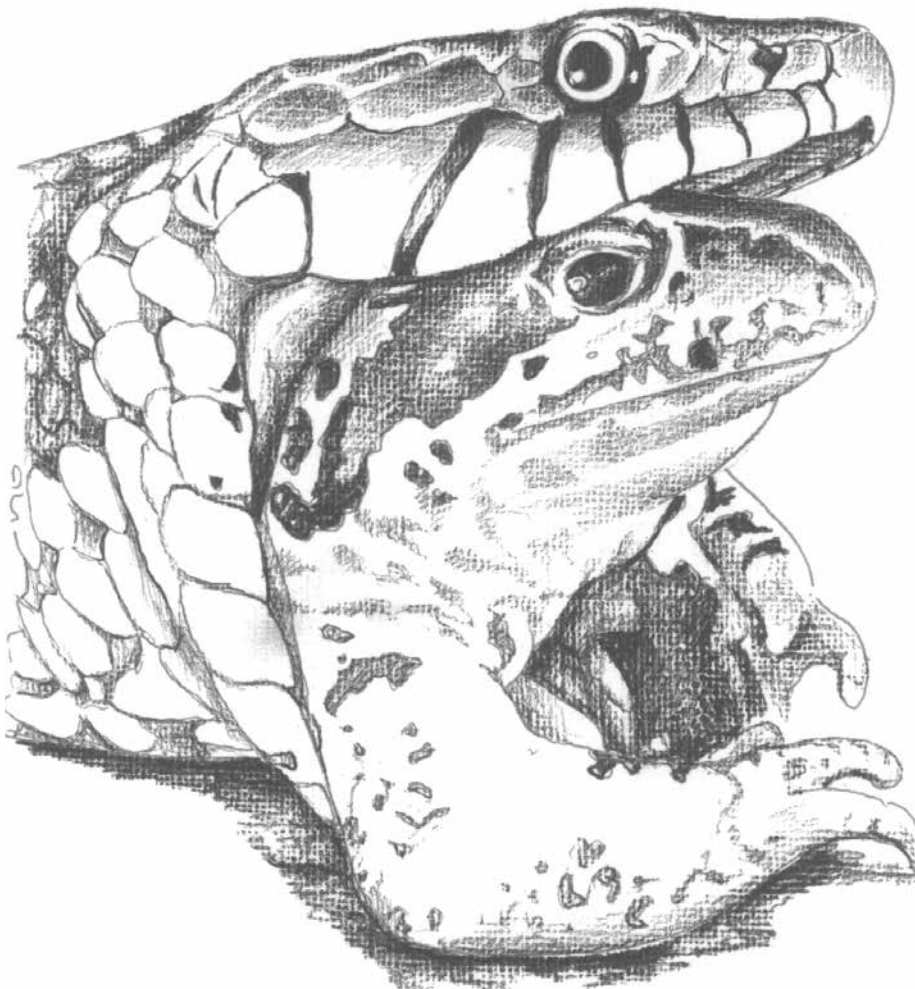
I saw a Grass Snake swimming in the River Mole earlier. This is not surprising as they swim well and eat frogs, toads and newts as well as small mammals and occasionally birds. Grass snakes swallow their prey in one piece while it is still alive.



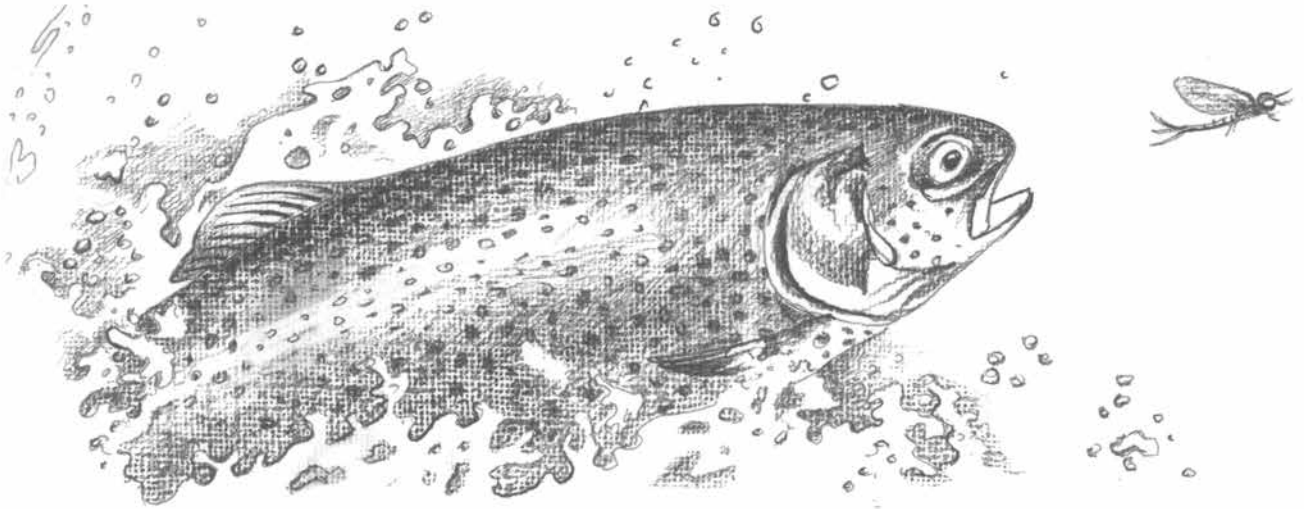
Grass snakes are not venomous.

They defend themselves by emitting a foul smelling secretion from their anal glands.

They will also hiss and fake strikes at attackers and as a last resort play dead.



Mayfly



It's May and I'm enjoying watching swarms of Mayflies flying up from the River Mole, providing rich pickings for fish and birds. The poor things only live for one day.

George Meredith, a famous Victorian poet, lived in Flint Cottage at the bottom of the Zig Zag road. He loved walking around Box Hill and I can imagine that walking along the River Mole inspired him to write this verse on the Mayfly in his poem:

The Sweet o' the Year

Now the mayfly and the fish Play
again from noon to night
Every breeze begets a wish
Every emotion means delight
Heaven high over heath and mere
Crowns with blue the sweet o' the year

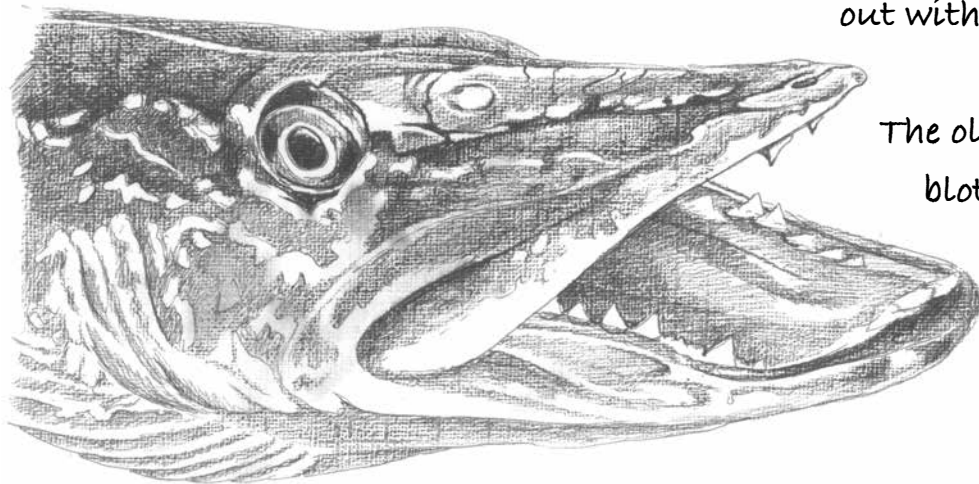


Pike



I'm still waiting to see this impressive predator catching food in the River Mole.

Pikes are long, slender, torpedo like fish, with sharply pointed heads and razor sharp teeth. They lurk among the vegetation in the river, bursting out with ferocious speed to catch fish, frogs and small mammals. The olive green colour with creamy blotches helps camouflage them.



A pike can eat animals up to half its own bodyweight, so it can even take young ducks and moorhens. The largest Pike caught in the UK was 21kg – the weight of two foxes!

Typeface options for Ranger's Notes

- 1 *walking in the Zig Zag valley or above the slopes east of the Viewpoint I often see a Kestrel hovering above the grassland.*

KESTREL
- 2 *Walking in the Zig Zag valley or above the slopes east of the Viewpoint I often see a Kestrel hovering above the grassland.*

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KESTREL