A male emperor dragonfly

Photo: Getty Images/iStockphoto

The wild side of dragonflies

On hot sunny days there's nothing more refreshing than spending time close to water. Sue Bradley discovers some great Gloucestershire Wildlife Trust reserves and meets a nature-loving butler

WORDS: **Sue Bradley**

Dragonflies are the aerodynamic acrobats of the insect world, thrilling audiences with sudden changes of direction and even backwards manoeuvres as they zip through the air.

Yet the appearance of these elegant fliers is actually the final flourish of a far longer existence, much of which is spent scouring the floors of ponds, rivers and streams in search of food to satisfy their voracious appetites.

The switch from silt-searcher to airborne ace occurs during warm days in spring and summer, when mature larvae use their six legs to crawl along reeds and other aquatic plants into the sunshine. Here the slender, winged adult-form of the insect emerges and takes to the air for a few short weeks to eat, mate and lay eggs.

Dragonflies and closely related damselflies are a familiar sight around wet spots, with several different species seen in and around Gloucestershire Wildlife Trust nature reserves such as Coombe Hill Meadows near Tewkesbury and Woorgreens in the Forest of Dean, and at the Cotswold Water Park.

In fact, the types seen in various locations tell ecologists a lot about the condition of these bodies of water.

'They're good indicator species,' explains Richard Mundy, the forest waters officer for Gloucestershire Wildlife Trust.

DID YOU KNOW?

Damselflies' eyes have a gap between them, while dragonflies' are larger and close together. Dragonfly wings are different sizes and held at right angles to the body.

Photo: Ross Hoddinott/2020 Vision

The emperor dragonfly is the largest species in the UK

'They provide a lot of information about the water body: some species such as the broad-bodied chaser and brown hawker thrive in quite dirty water; water that's rich in nutrients. Water like this causes algae growth.

'Most dragonflies don't like that kind of water, however, and a good diversity indicates a healthy environment.'

Another reason why these insects are important is their diet, which contributes to keeping the likes of mosquitoes and midges in check.

'Both larvae and dragonflies are voracious predators,' he says. 'The larvae will eat anything, including small fish if they can catch them, and things like freshwater shrimps.

'At the other end of the food chain is the hobby, a type of falcon especially evolved to eat dragonflies, while damselflies are eaten by wagtails, flycatchers and other small birds.'

The largest species of dragonfly in the UK is the emperor, the males of which are bright blue while the females are a greener colour and can sometimes be seen laying their eggs on water plants.

Southern hawkers are large and inquisitive and will often fly right up to people. The males are dark with blue and green markings while the females are brown and green.

Four-spotted chasers are easily recognised by the two dark spots on the leading edge of each wing and are common in Gloucestershire. They spend a lot of time flying over water for insect prey or to mark out their territories.

The best time to see dragonflies is between 10am and 2pm during sunny days, with smaller ponds preferred to large lakes.

Gloucestershire Wildlife Trust

COTSWOLD GREATS

THE PALMATE NEWT

Palmate newts get their common name from the way that the toes on the back feet of the males become webbed during the breeding season, making it easier for them to grasp their desired females.

These amphibians, known scientifically as *Lissotriton helveticus*, are brown with lines of black spots and are similar in size and colour to the smooth newt *L vulgaris*, but don't have marks on their pink or yellow throats. The males also have a filament on the ends of their tails.

Palmates are the smallest family of newts in the UK, reaching up to 9cm in length.

They eat tadpoles and invertebrates such as worms, slugs and insects, which they catch using their sticky tongue when they're on land. Occasionally other palmate newts are on the menu too.

At this time of year (August) palmate newts live on land and are most active at night. They return to the water between February and July to breed, while from November they spend the winter months in damp soil, often under logs, stone walls and the roots of plants.

Look for palmate newts in shallow ponds in acidic habitats, such as those found at the Gloucestershire Wildlife Trust nature reserve at Wigpool, a mile from Mitcheldean. This site is a remnant of a bog and heathland that once covered most of Wigpool Common.

Palmate newt, *Triturus helveticus*

Photo: Getty Images/iStockphoto

Diving beetle

Photos: John Bridges

POND DWELLERS AND VISITORS TO SPOT

Water beetle	Raft spider	Common frog
Pond skater	Common water-measurer	Greater pond snail
Diving beetle	Nautilus ramshorn snail	Water louse
Water flea	Lake limpet	Daubenton's bat (at dusk)
Caddisfly larva	Water cricket	Flat worm
Dragonfly nymph	Pirate otter spider	Duck leech

My wild life

CHARLES PASQUIER, butler and painter

Living at Sudeley Castle is like being in the middle of a nature reserve: often I see foxes, rabbits and even deer. Once I described it to a friend as a Disney film.

My role as butler means I have many hats to wear at Sudeley, between managing the household and helping Elizabeth, Lady Ashcombe with her busy working life. I've been here over the past four years and never grow tired of the beautiful surroundings; it's lovely to be able to step outside from time to time to listen to the birdsong, which reassures me. At night I love to hear the comforting sound of the owls. I also hear the dawn chorus; it's so loud that it wakes me up and sometimes I wish it wasn't quite so early!

During the lockdown we had things like geese and deer coming into the garden, emboldened by the absence of visitors. It was amazing to be eating breakfast and watching them.

I'm a country boy at heart, having spent my childhood in The Vendée in France. The countryside is similar there to how it is here, although one of the things I love about being in England is the skies; during my years here I've noticed how they contain more delicate colours, including pastel and very light blues, oranges and pinks that we don't see on the Continent, where the blue skies are more vibrant and 'in your face'. I am a big fan of Turner, the master of the English sky.

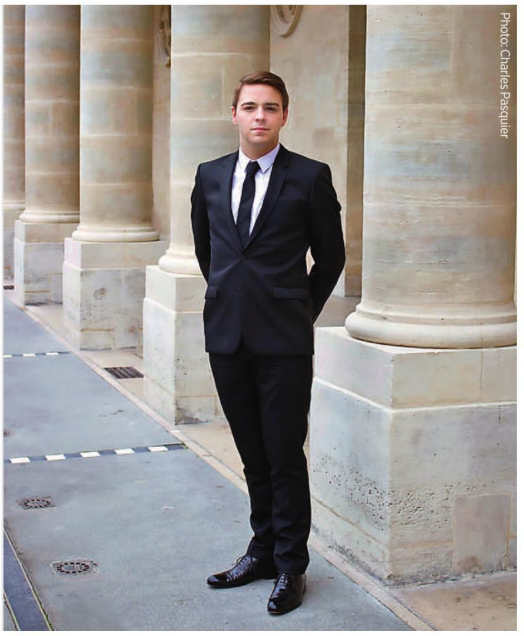

Photo: Charles Pasquier

ABOVE: Charles Pasquier – who has been butler at Sudeley Castle for the past four years

When I'm not working, I stay with my partner and always choose to drive along the Fosse Way to get there. At the beginning of summer the greens of the fields, trees and hedgerows are so vibrant and the light is amazing. I find the colours within the Cotswolds so inspiring.

I have always painted or drawn and find it a wonderful way to express my feelings and escape the world. I studied car design and worked in that field for 11 years before deciding to discover new worlds and experiences by training to be a butler. As yet I haven't painted too much of the countryside in Gloucestershire, although I have made a series of paintings of Sudeley.

I worry about the loss of bio-diversity and it pleases me that there are parts of the garden at Sudeley that are allowed to be more wild, which attracts a variety of insects. This gives me hope.

HOW TO MAKE A POND IN YOUR GARDEN

Photo: Tom Marshall/WildNet

Ponds bring an additional layer of wildlife to gardens

Ponds bring an additional layer of wildlife to gardens large and small.

Look to situate a new area of water in a warm, sunny spot or one with partial shade or dappled sun for part of the day.

Simply dig a shallow hole, taking care to ensure the ground either side remains level. Try to include a shelf part way down so that some areas are shallower, and provide 'soft' edges so that any wildlife that falls in can get out again.

Remove sharp stones and place a 5cm layer of sand, or some other cushioning material, at the bottom of the hole.

Lay a butyl liner across the hole and onto the ground around it. A trench dug around the pond can be used to hide the edges. Place large stones and sand around the pond to weigh down the liner and protect against sun damage. A layer of sand should also be placed within.

Fill the pond with collected rainwater or tap water and, as the liner stretches, backfill the trench with soil. Use turf, stones and logs to cover any exposed pieces of liner and create habitats.

After one to two weeks, look for native pond species to populate the pond.

If space is at a premium, try making a mini pond using a deep container. Plastic trugs, galvanised cattle troughs and tin baths are ideal for this.

Find out more and download free leaflets: gloucestershire wildlifetrust.co.uk/actions/how-build-pond