



Avon
Wildlife Trust

Photo: Pete Blanchard. Registered Charity No. 280422

A Year in the Life of **Portbury Wharf**

Protecting **Wildlife** for the Future

Portbury Wharf nature reserve

The Portbury Wharf nature reserve comprises 117 acres of wetland, open water and hay meadows at the foreshore of the Severn Estuary. With the second highest tidal range in the world, the estuary is unique in Britain and very rare worldwide. This location provides a fantastic wildlife corridor into the Gordano Valley, where Avon Wildlife Trust has several other reserves, and onto the North Somerset

Levels, providing a rich feeding ground for thousands of birds.

The nature reserve was created as a result

of a unique partnership arrangement between North Somerset Council, the developers, residents of the Port Marine

'urban village', and Avon Wildlife Trust. Planning consent for Port Marine was given on condition that a nature reserve was created on adjoining land and Avon Wildlife Trust was chosen to manage the nature reserve.



Formed in 1980, Avon Wildlife Trust is the largest local charity working to protect wildlife and inspire people in the West of England area. The Trust seeks to develop an increasingly secure future for biodiversity and wildlife by creating sustainable 'Living Landscapes' for future generations, connecting healthy habitats across the West of England. It aims to inspire people about wildlife and champion nature for its economic contributions, health and well-being benefits and intrinsic value.



The nature reserve is home to many different species and this journal has been created as a guide to help you enjoy the wildlife throughout the year. Avon Wildlife Trust works hard to protect both the resident and visiting wildlife, creating an environment that enables them to flourish. People are important to us too and we hope to spark a curiosity and interest in the natural world by providing a variety of activities, such as wildlife walks, photography classes, children's nature activities, school learning programmes and family fun days.

World Wildlife Web

All across the country wildlife is travelling around just like you and me. Birds fly across continents, fish travel across seas, butterflies and bees feed on the flowers and mammals shelter under the hedgerows. With development pressures and changing farming methods, much of our natural environment has changed impacting on the survival of many species.

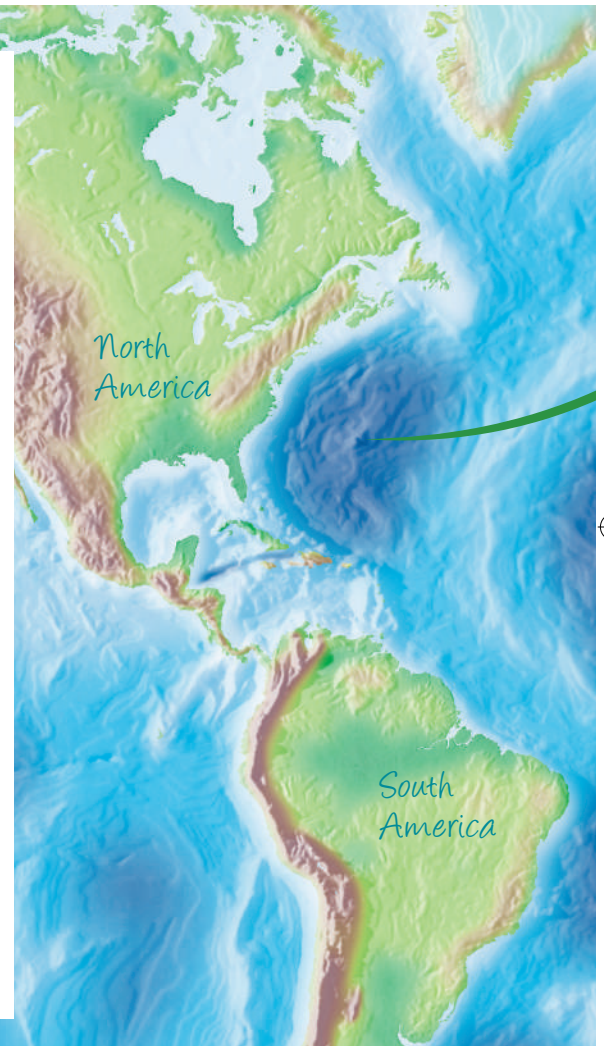
The State of Nature report 2013, jointly compiled by a coalition of UK wildlife organisations, states that

«far more species are declining than increasing in the UK»

In fact, 60% of the 3148 species assessed have declined in the last 50 years. Worryingly, the report states that a

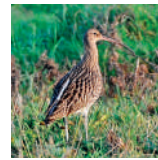
«large number of them are threatened with extinction»

We need to protect designated areas such as nature reserves but we also need to be mindful of how species travel across the landscape. Encouraging wildlife to our garden by growing nectar rich plants, providing ponds, putting out bird food and avoiding the use of chemicals can help to provide crucial stepping stones between nature rich areas.





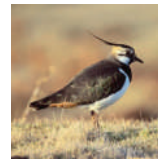
Portbury Wharf provides a temporary home for many species as they travel across the world.



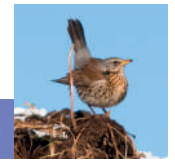
Curlew



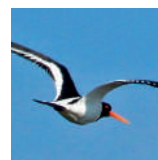
Redwing



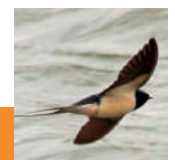
Lapwing



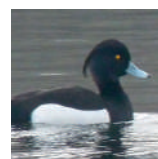
Fieldfare



Oystercatcher



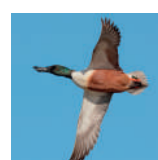
Swallow



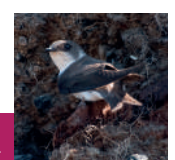
Tufted duck



Swift



Shoveler



Sand Martin

January

January is often the coldest month of the year at Portbury Wharf, bringing frosty mornings and crisp, winter days. The large pools, ponds and rhynes (drainage ditches) on the reserve provide a rich feeding ground for visiting birds such as lapwing, curlews, oystercatchers and shovelers.



Pete Blanchard

The curlew can often be seen at Portbury Wharf, particularly during the winter months. It is the largest European wading bird, about the same size as a pheasant, and recognisable by its long, downcurved bill and long legs. It often appears camouflaged against the landscape with its brown mottled body so is usually detected by its distinctive call.

Bird of the month

Did you know?

The two power stations at Portbury were decommissioned in the late 1980s and demolished some years later. To the east lay unspoiled farmland, protected from flooding by a historic Sea Wall. Plans to develop residential and commercial areas around the Portishead docks were drawn up as long ago as the early 1990s. It was at this stage that mitigation plans for 'wildlife refuge land' to conserve the stretch of open farmland were drawn up.



Fox



Roe deer



Shelduck



Species *focus*

Stoats are distinguished from weasels by their bigger size and the black tip on their tail. They are skilful predators, feeding on rabbits and small rodents. They use the cover of hedgerows and walls to help them hunt and avoid detection by owls, larger carnivores and hawks. They do not make their own burrows but use those of their prey.



Darin Smith



What grows at Portbury Wharf?

Tall thorny-stemmed **teasels**, are recognisable by the beautiful tiny purple flowers in the summer which attract bees and butterflies. However, the conical seed heads also provide valuable food for birds in the winter and a place for ladybirds and other insects to keep warm.



February

Although it's not officially spring yet, the reserve starts to show more signs of life in February. The buds on the trees start to grow, snowdrops can be seen along the woodland edges and on sunny days the birds start to sing away merrily. Look out for footprints in the mud and see if you can identify their owners.

The wetland habitat of Portbury Wharf nature reserve provides 5 star accommodation for amphibians such as **frogs**. They become very noisy in late February as the weather warms up and the males start to attract the females with their loud croaks. Frogs can breathe underwater and many spend the winter in the soft mud and decaying leaves at the bottom of ponds, ready to attract the first females as soon as it is warm enough. Frog spawn is laid in clumps, differing from toad spawn which is laid in singular lines of eggs.

Species focus



Wildlife Photography

Create your own nature journal of Portbury Wharf and the surrounding area by documenting the natural world through the lens. Local wildlife photographer Iain Green recommends visiting wild places at different times of day and year to determine when wildlife activity is at its peak. Get up early or go out late to get the best lighting conditions and use a reflector or piece of white card on a bright day to bounce sunlight onto the shady side of your object.

Something to do!



Willow



Hazel catkins



Snowdrops



Darin Smith

Lapwings are also known as Peewits or Green Plovers. They have a distinct black and white plumage and a black crest. In winter they can form large wading flocks and are often seen in the North Pools at Portbury Wharf. The name lapwing has been attributed to both the «lapping» sound its wings make in flight and from its habit of drawing potential predators away from its nest by trailing a wing as if broken.

Bird of the month

What grows at Portbury Wharf?

Snowdrops are one of the first flowers to be seen at Portbury Wharf, closely followed by the yellow lesser celandine. Due to the scarcity of pollinating insects at this time of year, snowdrops spread mainly through bulb division. Snowdrops have many fans, known as galanthophiles, named after the Latin for common snowdrop - *Galanthus nivalis*.



Chloe Malpas

March

March heralds the arrival of spring and a burst of energy erupts across the reserve as breeding birds start to look for nesting sites. The main island in the North Pools at Portbury Wharf has been completely levelled to welcome waders and wildfowl, the panoramic view of their surroundings making them feel safer and the stone surface attracting terns and little ring plovers.

Bird of the month

The **reed bunting** is similar in size to a house sparrow. It can often be seen singing from its perch on the top of a reed or tree. An all year round visitor to the wetlands of Portbury Wharf, it feeds on seeds and invertebrates. It builds its nest out of moss and grasses, on the ground, hidden amongst the reeds. The species is recovering from a severe population decrease that started in the 1970s.



Pete Blanchard

What grows at Portbury Wharf?

At Portbury Wharf we have a variety of **rush** species growing along the drainage channels where they enjoy the moist conditions. Soft rush, hard rush, sea club rush, common club rush and common spike rush have all been recorded on site. Rushes have many uses and are used in many parts of the world for weaving, soft rush being used to make the tatami mats of Japan. The pith is also used as wicks in open oil lamps and tallow candles.



Blackthorn blossom

Gorse flowers

Coltsfoot

Something to do!

Look for **animal tracks and trails** in the mud and see if you can follow them. You could find fox, bird, rabbit, dog, deer and hedgehog footprints. Where do you think they live?



Hedgehog



Badger



Fox



Dog



Heron



Gull



Rabbit



Pete Evans

Brown hares were introduced in the Iron Age but are now widespread across the lowlands of England, Scotland and Wales. They have very long, black tipped ears and can reach speeds of up to 40 mph to escape predators. Although they are usually solitary creatures, in the springtime you can see the females fighting off the mating urges of the males, demonstrating the boxing behaviour that hares are famous for.

Species focus

April

Spring is well and truly on its way now at Portbury Wharf. The hedgerows are bursting into leaf, blackthorn bushes are covered in beautiful white blossom and the birdsong is getting louder! As the wildlife starts to take advantage of the warmer weather Bernie, the Reserve Manager, carries out reptile surveys in 104 different locations and the barn owls can be seen out hunting more frequently as they start to feed their brood.

Species focus



Water voles are Britain's fastest declining mammal but we have a good population at Portbury Wharf. Look out for burrows in the riverbank, often with a nibbled 'lawn' of grass around the entrance. Listen for the distinctive splash as they enter the water and see if you can spot their rounded, cigar-shaped droppings.

Something to do!



Taking children on a **minibeast hunt** is a great way to inspire them to investigate the world around them. Have a look along the hedgerows, on the leaves, in the long grass, under logs and stones. See if you can identify different creatures using our guide.



Lesser celandine



Ladybird



Germander speedwell



Ant



Shieldbug



Lacewig

Bird of the month

Oystercatchers have distinctive large, black and white bodies with a long, orange-red bill and reddish-pink legs. They are wading birds that use their long beaks and legs to help them feed on cockles, mussels, worms and other small invertebrates that they pick out of mud or exposed soil.



What grows at Portbury Wharf?

Willow trees like to grow on moist soils so can often be found growing near rivers and damp ground like you find at Portbury Wharf. The leaves and bark of willow have been mentioned in ancient texts for their medicinal qualities, as a remedy for aches and fever. Unsurprisingly, willows all have plenty of bark sap, which is heavily charged with salicylic acid, an ingredient of the common aspirin. Look out for the male and female flowers which appear on different plants in early spring as catkins.

May

On warm days in May you can see many species of butterfly hunting for nectar and larval plants on which to lay their eggs. Plants such as bird's-foot trefoil, bramble, nettle, vetch and hawthorn provide suitable egg laying sites for butterfly species, including, speckled wood, peacock, red admiral, small tortoiseshell, common blue and brimstone.



Kev Lewis

The skylark's beautiful song radiates through the air as the bird soars high up in the sky over open grassland areas. The males rise almost vertically from the ground and stay suspended for several minutes before parachuting straight back down to the ground. Skylarks have declined by more than 50% over the last 25 years, as a result of increased intensive farming methods.

Bird of the month



Something to do!

International Dawn

Chorus day on 4 May is a worldwide celebration of this amazing aural spectacle. It's worth getting up as the sun rises to take a walk and just marvel at the sheer volume and variety of the bird song at this time of day. Why don't you try and learn to identify some birdsong online first and then test your knowledge on the reserve? A few good ones to start with are chiff chaff, great tit, robin, little grebe and oystercatcher.



Peacock butterfly



Horsetail



Hart's tongue fern



Jack Perks

Species focus

The European eel is critically endangered, suffering a 95% decline in numbers since the 1970s. It takes 2 years drifting on currents across the Atlantic from the Sargasso Sea to reach our shores where it can spend up to 20 years in pools and rivers. Portbury Wharf provides a great habitat for young eels before they head back to the Sargasso Sea to spawn.

What grows at Portbury Wharf?

Hawthorn flowers during the month of May, and is also known as the May-tree. People used to think that hawthorn blossom smelled like the Great Plague in London. Scientists later discovered that a chemical present in the blossom is also found in decaying animals! The berries are important for wildlife in winter, particularly thrushes and waxwings who eat the haws and disperse the seeds in their droppings.



June

June brings the longest day of the year and much of nature is maximising on the warmth and plentiful food. Flowers are popping in the hedgerows and along the grass edges, providing nectar for the bees and butterflies. The barn owls can often be seen out hunting during the day as they continue to feed their growing brood.

Go bee spotting!



Buff-tailed
bumblebee



Early
bumblebee



Common
carder bee



White-tailed
bumblebee



Red-tailed
bumblebee



Garden
bumblebee

Something to do!

Rod Holbrook



Bird of the month

Barn owls have suffered a decline through the 20th century but luckily they have been breeding at Portbury Wharf for many years. We monitor the broods each year and manage the reserve to provide the owls with rich hunting grounds by leaving wide headlands of uncut grass around the reserve where they feed on mice, voles and shrews.

Species focus

The **hairy dragonfly** is the UK's earliest emerging hawk, appearing in May and June. It is mainly found near unpolluted, well-vegetated water bodies, and as such is an indicator of healthy habitats such as Portbury Wharf. Hawkers are the largest and fastest flying dragonflies; they catch their insect-prey mid-air and can hover and fly backwards. Hairy dragonflies get their name from the distinctive short hairs that cover their body.



Male



Female

Bird's-foot trefoil



Ragwort



Dogrose



What grows at Portbury Wharf?



Pyramidal orchid

This is a good time for studying **wildflowers** particularly along the banks of the main rhyne and in the sanctuary. Locally rare grass vetchling is found in abundance throughout the reserve. It is also a good time to enjoy the orchids at their finest. Orchids at Portbury Wharf include the bee orchid, pyramidal orchid, common spotted and southern marsh.

July

Portbury Wharf attracts several bat species, many of which hunt for insects over the pools and rhynes. The juveniles of the greater horseshoe bat feed exclusively on dung beetles attracted to the cattle dung in the fields. In July, female bats will be suckling their young babies, born last month, and already starting to learn to fly.

The male **tufted duck** has a distinctive tuft at the back of its black head and white flanks, whilst the female is entirely chocolate brown. It is our most common diving duck, feeding on aquatic invertebrates, waterweed and plant seeds. A frequent visitor to Portbury Wharf all year round, its numbers increase during the winter as birds visit from Iceland and Northern Europe.



Bird of the month

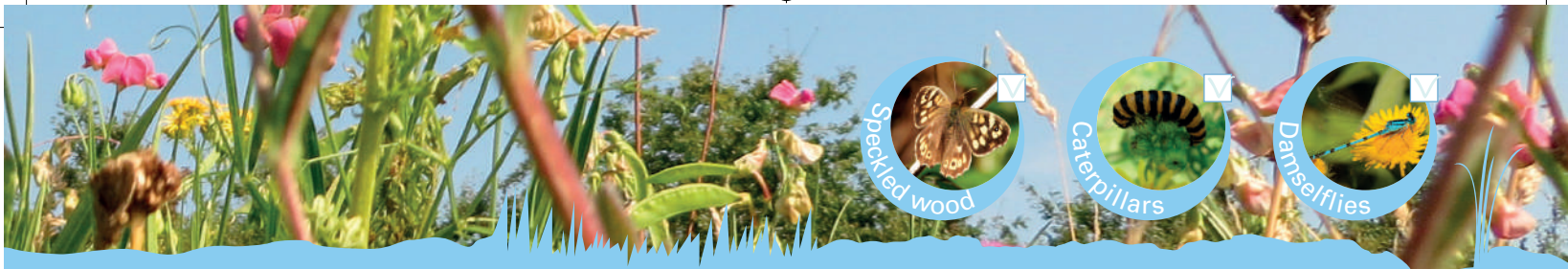
Something to do!

Become a nature prince or princess

and enjoy this colourful season by making a nature crown! Gather a selection of grasses, leaves, seeds, petals and other natural treasures and stick them to your cardboard crown using double-sided sticky tape.

Portbury Wharf
Nature Bugs





Speckled wood

Caterpillars

Damselflies



Julie Doherty

The **elephant hawk-moth** gets its name from the appearance of its larva, which has a long, trunk-like nose which it can withdraw when it senses danger to form a bulbous head. The eye markings on each side of its head then help to scare off predators. The colourful olive and pink adult moth is large, and can be seen at dusk from May to July.

Species focus



Tufted vetch is a member of the legume family. The delicate, perennial plants have long, grey-green leaves that grow in a symmetrical row from trailing stems. The deep purple flowers grow in dense clusters along a spike which are replaced by tiny seed pods.

What grows at Portbury Wharf?



Wildstock

August

During August the rich hedgerow fruit begins to ripen, providing food for people and wildlife. Juicy blackberries, bright red haws and rosehips start to appear and even the sloes on the blackthorn bushes start to ripen to a purply-blue colour. Hazelnuts and acorns start to fill out and squirrels jump from tree to tree looking for a winter stash.

Little owls can sometimes be seen during the daytime, perched on a tree branch or fence post. With bright yellow eyes and spotty plumage, they make a striking image. They hunt mainly at night and dusk, feeding on invertebrates, small birds and mammals. Introduced to England in the 19th century, little owls are our smallest species of owl, a similar size to the mistle thrush.



Pete Evans

Bird of the month



Dragonflies spend most of their life in the water as nymphs, eating invertebrates

and shedding their skin as they grow. They are some of the fastest insects in the world, reaching speeds of 30mph. Once known as the devil's darning needles, people believed that they sewed up the mouths of unruly children.

Did you know?



There are three species of **newt** native to the UK; smooth newts, palmate newts and the legally protected, great crested newts. The smooth or common newt as it is also known, has the widest distribution of our native newts. They emerge from hibernation in March, breed through to May and the adult newts leave the water in July. They spend the rest of the year close to the breeding pond, hiding in leaf litter, long grass and under stones. They feed after dark on small invertebrates as they prepare for hibernation in late September.



Dave Horflick

Species focus

What grows at Portbury Wharf?

The **oak** tree supports over 350 species, more than any other tree. After its death, an oak tree continues to support more than 200 types of fungi, woodlouse and other insects. They break down the oak tree's nutrients, which return to the earth, to feed new oak trees. The leaves and acorns of an oak tree are poisonous to many animals, except pigs, who enjoy eating them.



September

Quietly the trees and hedgerows begin their season change during September. Although many leaves are still green, you may notice some that start to acquire a hint of autumnal colour, and others fall to the ground as trees and bushes start to thin out. Listen to the birds as they start to defend their territories after the quieter summer months.

Brambles may be the enemy of gardeners but in the wild they provide safe nesting areas for many of our smaller birds. Their distinctive, plump blackberries are regularly harvested by people and wildlife, whilst the spring flowers provide nectar for early bees, hoverflies and butterfly species such as brimstone and speckled wood.



Julie Doherty

Something to do!

Hedgerow foraging Autumn is a great time to go foraging in hedgerows. Blackberries, elderberries, sloes and hazelnuts can all be used to flavour food and drinks. Make blackberry pancakes and sloe gin, add elderberries to jam and hazelnuts to apple crumbles. Hedgerows also provide valuable food for our wildlife so leave some for the birds and small mammals to enjoy too.

What grows at Portbury Wharf?



Blackcap



Wren



Robin

Bird of the month

Pete Blanchard



Shovelers have distinctive wide, flat beaks which have about 110 fine projections along the edges that help them to filter small insects and plant matter from the water. Males have a bright green head, a white breast and brown flanks; females are mottled brown. A group of shovelers is known as a 'crew'.

The **lesser horseshoe bat** is one of the smallest British bat species, about plum-sized, with a fleshy nose, shaped like a horseshoe. Formerly cave-dwellers, these bats now tend to roost in the roof spaces of large, old houses, stables and barns. At Portbury Wharf they can be seen hunting over the large pools where they feed on a variety of small insects including midges, small moths, lacewings and beetles. They have a life span of up to 30 years.

Species focus



Jim Mulholland

October

Throughout the autumn and winter months starlings start to flock together at dusk, swooping and swirling in unison to create one of the UK's best wildlife spectacles, known as a murmuration. Gathering in large numbers keeps the birds warm, allows for sharing of information and provides safety from predators.

The ancient looking **cormorant**, with its long neck and dark body, is often seen standing tall with its wings spread wide open. Members of the pelican family, cormorants are fantastic swimmers, using their webbed feet to chase fish underwater. A group of cormorants is known as a 'gulp' or 'flight.'

Pete Evans



Bird of the month

Something to do!

Leaf ID Before all the leaves curl up and fall, test your knowledge by using this simple key to learn how to recognise common tree species.



Oak



Elder



Hawthorn



Ivy



Field Maple



Hazel



Wildstock

Species focus

Evidence of **otters** has been found at Portbury Wharf, mainly by the discovery of their 'spraint' (dung) which contains clearly visible fish bones and scales. Otters suffered a rapid decline between the 1950s and 1980s, mainly due to aquatic pollution. Numbers have been steadily rising since the 1990s, so it is now classified as 'near threatened' and is legally protected. Otters are playful, nocturnal animals that hunt over large territories marked with their spraint.

What grows at Portbury Wharf?

The **hazel** is known as the 'Tree of Knowledge' and was believed to have magical properties. Hazel trees are traditionally coppiced (cut) to create strong, straight poles used to make woven hurdles, fencing, walking sticks and baskets. In the past hazelnuts were often ground up and mixed with flour to be made into nourishing breads.



November

Hibernating animals such as hedgehogs, along with toads, frogs, newts and other sheltering creatures are trying to keep warm and dry. Favourite sheltering spots are logpiles, under leaves, beneath stones and in long grass, so take care when tidying your garden and leave small areas for creatures to safely hide in.

Paint a picture

Even if you haven't painted since school, capturing a landscape or your favourite animal in paint, pastels or pencil can be a rewarding activity. Experiment with using natural materials to add colour such as mud, grass or plants. This painting of snipes was created by local artist, Hilary Kington.

Something to do!



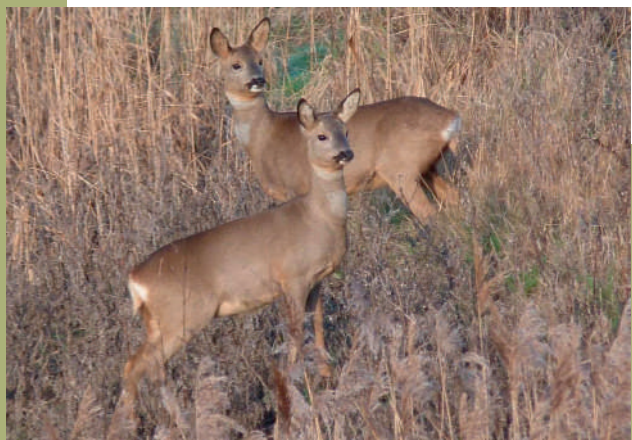
Common **snipe** have short legs and long, straight bills. Their mottled brown plumage provides great camouflage, making them hard to spot as they feed around the pool edges. They use their long bills to find small insects, earthworms and spiders in and around the soft mud, often feeding at dawn or dusk.

Bird of the month



Roe deer are native to Britain and are widespread today. The rut or breeding season is in July and August although the fertilised egg does not implant and grow until January, giving the new born the best chance of survival in the warmer months. Roe deer are active throughout the day and night but the best chance of seeing them is at dawn or dusk when they venture into more open areas.

Species focus



What grows at Portbury Wharf?

Phragmites australis or common reeds can be found along the rhynes and wetland pools of Portbury Wharf. Reedbeds form important habitats for birds, including rare and threatened species, such as bittern, marsh harrier and bearded tit. They are classified as a priority habitat in the UK Biodiversity Action Plan due to their importance for wildlife.



December

As the weather gets colder and the trees lose their leaves, birds start their migration to warmer climates. Species such as lapwing will join resident birds as they migrate from Northern Europe and Iceland. Look out for increasing numbers of gadwall, wigeon, redshank and dunlin on the pools and islands.

Goldfinch With its bright red face and yellow streak on the wing, this colourful little bird can brighten any winter's day. Although many UK goldfinches migrate south for the winter, goldfinches can still be found at Portbury Wharf during December. They feed on various tree seeds, such as alder and birch, and on thistle, teasel and dandelion seeds, which they obtain using their thin bill and light weight.



Iain Green

Did you know?

Hedgehogs have suffered a huge decline over the last 50 years. Habitat fragmentation, caused by increasing development, puts pressure on isolated populations. Hedgehogs need to roam when looking for food and several different hedgehogs may enter your garden over a number of nights, feeding mainly on beetles, caterpillars and earthworms.

Bird of the month



Tom Marshall

The red **fox** is typically active at night, but can be seen in the day in more undisturbed areas. It has an extremely broad diet including small mammals, invertebrates and birds, plus fruit and items scavenged from dustbins, bird tables and compost heaps. Foxes generally only survive for one or two years in the wild.



Species focus

What grows at Portbury Wharf?

Mistletoe is an evergreen parasite, becoming clearly visible on deciduous trees in the winter, particularly as it tends to favour trees in a light, open position. An ancient symbol of fertility, it has long been associated with the Christmas kissing tradition. Birds such as redwings, fieldfares and increasingly blackcaps, are essential for seed dispersal.



Creating a home for wildlife



The Gordano area hosts many of the bat species resident in Britain.

At Portbury Wharf, an impressive count of at least 10 species of bat have been recorded either foraging or roosting on the reserve. These species include the lesser horseshoe and Nathusius' pipistrelle, which are of particular importance as they are rare on a national scale.



Amy Lewis



Julie Doherty

Avon Wildlife Trust, Portbury Wharf bird ringing group and the weekly volunteer wardens carry out wildlife surveys at the nature reserve to monitor specific species and assess the health of the different habitats.

Birds, reptiles, bats, badgers, invertebrates, plants, water voles, newts and barn owls are all surveyed which helps us to build up data to ensure that our management plans are having the expected effect. This, in turn, allows Avon Wildlife Trust to continue to create a nature-rich habitat for local people and wildlife to enjoy.

Since taking over the management of the site, Avon Wildlife Trust has improved the wetland habitat and created pools with nesting islands and a sand martin bank, re-established neglected ponds, maintained coastal and floodplain grazing marsh - a UK priority habitat - and managed the ditches for water voles, otters, eels, water birds and amphibians.

Other habitat improvements include creating barn owl corridors, restoring hedgerows and wildflower meadows, planting orchards and protecting the mature trees.



Barn owl chicks



Slow worm

For more information go to avonwildlifetrust.org.uk



Green woodpecker



Firecrest



Nightjar



Treecreeper

Bird ringing involves attaching a metal alloy ring to a bird, usually the leg, which carries a unique number. This allows the ringing group to collect data about the movements, health and longevity of individual birds and provides hard, scientific proof used in saving important habitats. It also enables the group to reliably record the age, sex and species of each bird caught. More information can be found at portbury-wharf-ringing.co.uk



Portbury Wharf nature reserve is a wonderful, rich and diverse haven for wildlife. Take time to enjoy it, visit it regularly and help to ensure its future by respecting the landscape and wildlife.

This journal was produced by Avon Wildlife Trust in collaboration with the local community. Special thanks go to Paul Hand for his knowledge and photographs of birdlife, Beth Doherty for her commitment to providing outdoor activities for children in Portishead, the Portbury Wharf volunteers, Hilary Kington for her wonderful artwork and local photographers; Chloe Malpas, Dave Horlick, Angus Gordon, Pete Evans, Sarah Haworth, Nikki Pinder and Pete Blanchard.

Julie Doherty, Community Groups & Partnerships Manager