

# The Importance Of Conservation At Dartington

Across the Dartington estate you will find a diverse array of habitats. The River Dart runs for four miles along the estate's eastern side, whilst the Bidwell Brook cuts across from the west, creating areas of marshland at their confluence.

The forestry plantations of North American redwood, and eucalyptus for biomass, sit alongside hundreds of veteran and ancient native trees, some more than 1,000 years old.

In recent years the land has been entered into the environmental Higher Level Stewardship scheme and transformed during the first phase of our Land Use Review project. Artificial fertilisers, herbicides and fungicides have been largely prohibited, with the estate moving towards organic management and in some cases even biodynamic management. Fields of maize have been replaced by a rotation of crops including flowering clover, heritage wheat and a greater diversity of fruits and vegetables, alongside our listed parkland and permanent pastures. Crisscrossing it all run a series of hedges, some hundreds of years old, others newly planted or newly laid to keep these vital wildlife corridors in good health.

This diversity of habitats enables the estate to play host to a wide variety of wildlife, some permanent, others only visiting. Otters, kingfishers and lampreys can be found along the river; wading birds like little egrets, herons and even a visiting spoonbill grace the marshes. Voles are thriving and barn owls follow them here, keeping the tawny owls and the dozen or so bat species company during the night. By day the cirl bunting has returned to our field edges whilst nuthatches, woodpeckers and other LBJs flit among the trees, keeping an eye out for the occasional hobby or kestrel.

Our estate conservation warden is ably assisted by a team of conservation volunteers who provide everything from expert advice and dedicated monitoring to practical hands on labour. The data they gather informs our national understanding of biodiversity in this country and the work they do contributes to a vital network of wildlife habitats.

# Birds

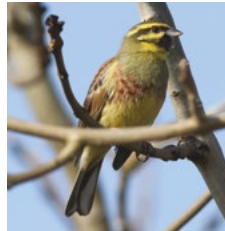
In recent years there has been much excitement as we've started to record rare birds on the estate, such as the ciril bunting. This bird is what's known as an indicator species, meaning its presence indicates good wildlife habitat for farmland birds; its absence signals poor habitat.

Changes in land management have probably had an impact as well as the work the RSPB is doing around the country. Farmland birds often require diverse food sources, plenty of insects in the spring and summer, seeds in the autumn and winter, and bramble and hedgerow to nest in. A move to organic management, replanting hedges and mixing grass and arable crops on the estate, is enormously helpful to the ciril bunting.

The ciril buntings have been recorded by the conservation volunteers who conduct regular bird surveys for all species, recording the birds' location and numbers. Over time we can use these records to see how wildlife on the estate is doing. The volunteers have also put out a number of supplementary feeders they built themselves, RSPB-designed and stocked for smaller farmland birds over the winter months.



# Farmland Birds



Ciril Bunting  
*Emberiza cirilis*

Ciril buntings are classed as a passerine or perching bird and have a wingspan of 22-25.5cm. With numbers dwindling down to 100 pairs, this bird nearly became extinct by the late 1980's, but numbers have now risen to over a thousand pairs in the last 20 plus years. Once found over much of Southern England changes in farming practices have affected the bird considerably and it is now restricted mainly to South Devon and parts of Cornwall.

Woodlark  
*Lullula arborea*

Woodlarks are streaky brown birds with a well-defined small crest on their head. This bird is 13.5-15cm long and has an unusual short tail and broad rounded wings. The woodlark populations are decreasing. It once bred in Wales and in Central England but now is only found in southern parts of England.

# Water Birds

The river, brook and ponds on the estate attract a different selection of birds from the fields. In the newly restored Queen's Marsh, two ponds should provide year-round water, for use by wading birds and wildfowl. As part of the project the conservation volunteers also worked with a team from the Environment Agency, building new features.



Goosander  
*Mergus merganser*

Goosanders are mainly a freshwater bird, a colourful diving duck, and are a member of the sawbill family. They are 58-66cm in length and have a wingspan of 82-97cm. This bird has spread across Northern England and into Wales, reaching as far down as the South West. Today there are small populations in Devon.



Kingfisher  
*Alcedo atthis*

Kingfishers are a distinctive bright blue and orange and reside on slow moving or still water. They are vulnerable to harsh winters and habitat deterioration through pollution or insensitive management of watercourses and are classed as at risk because of their unfavourable conservation status in Europe. There are approximately 3,800 - 6,400 breeding pairs in Central and Southern England.

# Bats

Twelve species of bat have been recorded on the estate and the greater horseshoe bat is one of the key species referenced in the Higher Level Stewardship Scheme, meaning Dartington proactively manages land and buildings to improve their habitats.

Leaving field margins provides more habitat for their food source which includes insects while bat boxes which our staff and volunteers have placed across the estate encourage shelter, habitat and breeding sites. Creating new ponds including the one at Queen's Marsh encourages flying insects as insects emerge from the water or fly over it. Bats navigate using sonar, and planting hedgerows creates 'bat corridors' - they use the hedgerows to navigate their territory.

It is estimated that over 280 species of insect can live in a single mature oak tree so prolonging the life of our veteran trees through surveys and surgery supports an abundance of insect life, an important part of the bat's diet. For some species our trees provide safe roosts.

We undertake regular winter roost surveys and maternity roost surveys, mostly for the lesser horseshoe bats, ensuring that populations are stable in number and healthy. Existing roosts are very carefully protected and any renovation work is always preceded by a bat survey conducted by Colin Wills from Devon Bat Group. If you're interested in helping with bat surveys, please visit the 'Getting Involved' section of our website where you can find out more about volunteering opportunities.



Brown Long-Eared Bat  
*Plecotus auritus*

The brown long-eared bat is medium sized with extremely large ears. All UK bats are nocturnal. They feed on midges, moths and other flying insects at night by echolocation. This species is widely located across Britain but is not found in the Scottish Islands where there are fewer trees.



Soprano Pipistrelle Bat  
*Pipistrellus pygmaeus*

Pipistrelles are the most common of the UK bat species and are the bats you are most likely to see 20 minutes after sunset. Populations of pipistrelles have declined in the last few decades due to modern farming practices. They are widely located across Britain with the exception of the very northern parts of Scotland.



Lesser Horseshoe Bats  
*Rhinolophus hipposideros*

This bat is one of the smallest in the UK and about the size of a plum when the wings are folded. The habitats they favour are woodland edges, pastures and wetlands. Lesser horseshoe bats are rare and endangered but their populations have increased since 1999 with distribution restricted to Wales, Western England and Western Ireland.



Greater Horseshoe Bats  
*Rhinolophus ferrumequinum*

The greater horseshoe bat is one of our largest bats and is roughly the size of a small pear. Their preferred habitat is open farmland and parkland with surrounding trees and are found in the South West England and South Wales. There is a stronghold corridor of these rare and protected species between Buckfastleigh and Berry Head. Their flight path goes over Dartington, an ideal feeding ground.

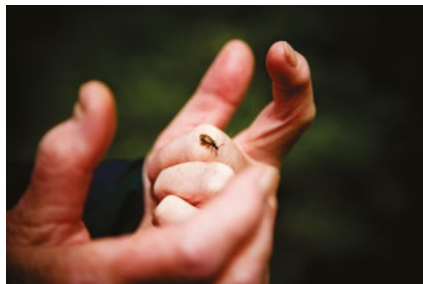
# Beetles

Beetles are in abundance at Dartington due to the varied habitats across the wider estate such as woodlands, the tree-lined River Dart, unimproved grassland, parkland, wet grassland and areas containing veteran, ancient trees and old rural buildings.

Habitat piles and decaying wood provide shelter and food for beetles. So whenever we do any practical conservation work like coppicing during the winter, we always leave habitat piles on the ground in the woodlands and grasslands to help create healthy ecosystems. Our conservation staff and volunteers also build 'bug hotels' with local school groups, encouraging children to take them home and pop them in their gardens, giving these small and very important beasties a place to call home.

A local entomologist conducts regular surveys and we compile an annual beetle report which often contains species that have never been found before in Devon and sometimes the UK!

You can find these reports on our website.



Bloody-Nosed Beetle  
*Timarcha tenebricosa*

The beetle measures 15-20mm in length and is fairly common across Great Britain. It has a notable feature by which the beetle gets its name in that it expels bright red fluid from its mouth as a defensive mechanism.



Tanner Beetle  
*Prionus coriarius*

Tanner beetles can reach 18-45mm and is one of Britain's largest beetles. There is a scarce, scattered population in Southern Britain. The adult beetles are nocturnal and can be seen from July through to September.



Wasp's Nest Beetle  
*Metoecus paradoxus*

It is an unusual looking beetle about 10mm long with feathery antennae and is a parasite of wasp nests. This beetle was last photographed in July 2017 on the Deer Park Wall; there are only three other records post-1900 from Devon.



Violet Oil Beetle  
*Meloe violaceus*

The body of the beetle varies between 10-30mm and is black in colour changing to a purple, blue or green sheen as the light reflects on the body. Violet oil beetles are important for conservation as they are indicators of strong mining bee populations and wildflower-rich habitats. These beetles have strongholds in the South West of England, Peak and Lake Districts and Scotland. However, they are declining considerably in the North and East of England and Wales.

# Moths And Butterflies

Moths and butterflies are recorded in large numbers at Dartington. This is down to the large suitable habitats consisting of woodland, wildflower meadows, parkland, tree-lined river and unimproved grassland.

The floristically rich meadows including wild orchids are temporarily fenced off from the cattle at Dartington allowing the flowers to thrive throughout the spring and summer and drop their seeds for the following year.

Recordings are taken in different ways for moths and butterflies.

For butterflies, a number of volunteers carry out butterfly transects, fixed routes which they walk weekly during the season butterflies are flying (roughly April to September). As they walk, volunteers record the total number of butterflies and the number of each species they see. Wind speed and direction, temperature and sunshine cover are also noted as they can affect butterfly numbers.

For moths, the system is slightly different as it would be quite difficult to see them when one is walking about in the dark. Instead a light is used to attract them into a container, a moth trap, so they can be identified and counted before they're released.



Silver-Washed Fritillary Butterfly  
*Argynnis paphia*

The silver-washed fritillary has wingspan of 54–70mm. Its favoured habitat is sunny deciduous woodlands particularly oak woodlands but it can also be found in coniferous woodlands. Fairly scarce, the species seem to be making a comeback. They are mainly found in Southern England, Wales and Ireland but are not present in Scotland, Isle of Man or the Channel Islands.



Marbled White Butterfly  
*Melanargia galathea*

With a wingspan between 53–58mm, it is a very distinctive and attractive black and white butterfly. They live in small colonies on unimproved grassland where there are different varieties of grasses. Larger colonies are located on unimproved chalk or limestone grassland but may occur in woodland clearings, woodland rides, road side verges and railway embankments. Marbled whites are found throughout South and Central England as well as parts of Wales.



Small Tortoiseshell Butterfly  
*Aglais urticae*

The small tortoiseshell butterfly has a wingspan between 50–56mm. This butterfly is very common and located throughout Britain and usually found in gardens and a range of habitats. However, over the last couple of years there has been a steady decline in sightings across the country.



Wall Brown Butterfly  
*Lasiommata megera*

The Wall Brown Butterfly has a wingspan between 44–46mm and is sometimes confused with small fritillary butterflies. This butterfly is widely distributed across Great Britain and Ireland but rarely occurs in high numbers. Over the last decade it has declined considerably in various inland areas of Central England & Northern Ireland.



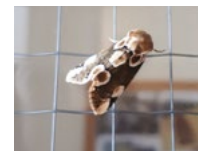
Bordered Beauty Moth  
*Epione repandaria*

This has a wingspan of 25–30mm. It inhabits wet woodland, fens and other marshy areas and is fairly common and distributed in England and Wales but is scarce in Scotland and Ireland.



Herald Moth  
*Scoliopteryx libatrix*

A common moth with a wingspan between 38–46mm and found throughout the British Isles and Ireland. The adults spend winter in caves, barns or outbuildings and are found feeding after dark. (The photograph was taken in the basement of the derelict Aller Park School whilst doing a bat hibernation survey during winter.)



Peach Blossom Moth  
*Thyatira batis*

This moth's wingspan ranges from 32–38mm. It is fairly common in Britain apart from the far North and is mainly found in woodland and areas of scrub and various other place particularly where bramble grows.



Orange Moth (Female)  
*Angerona prunaria*

This moth has a wingspan between 35–45mm, with the males usually smaller than the females. It is locally common and found in woodland and heath land in southern parts of England, Wales and Ireland.

# What Can You Do To Help Wildlife On The Estate?

## Did you know that...

Some wildlife on the estate, such as deer, like to 'lay up' during the day in the woods and shrubs. Others, like skylarks, nest at ground level in tall grass during spring and summer. Keeping to the path and keeping dogs on leads during ground nesting bird season (March to July) means less disturbance and stress for wildlife.

Empty beer cans, bottles and bits of plastic are common types of litter we find on the estate. They may seem harmless, but in fact insects and small mammals looking for food can become trapped and die in discarded rubbish. Please care for our smaller creatures by taking your litter home and recycling it carefully.

As well as being harmful to children, dog poo can cause serious birth defects and blindness in sheep, cattle and wild animals, which is why it's so important that owners pick up after their dog.

A couple of years ago we came close to losing one of the woods on the estate to a fire that no one could see. In a spell of dry weather, a campfire ignited the soil underneath which spread through a network of dry roots. Thankfully an eagle-eyed little girl spotted smoke coming from the ground and saved the wood. Incidents like this is why we ask people not to have fires on the estate.

## Let us know what you see

We have a very small estate team (relative to the estate size) so lots of eyes on the estate recording what is here or alerting us to any problems is incredibly helpful. We love getting photos of the wildlife people have seen on the estate.

By recording sightings on the Devon Biodiversity Record Centre, you can help keep up to date a record of Devon's wildlife (something of national conservation importance). To record your sightings, go to: [dbrc.org.uk](http://dbrc.org.uk)

## Join the conservation volunteer team

Take part in annual survey work or get stuck in on a weekly basis, there are all kinds of options for all abilities and interests.

Visit the 'Get Involved' section of our website.