

# Survey results for 2011

Throughout 2011 we commissioned a varied programme of surveys to continue to build up our knowledge of the species and habitats present on our landholdings.

## The 2011 surveys included:

### Moths

2011 saw the third year of moth surveys completed on five of our operational sites. The surveys have involved evening visits with moth traps in use between dusk and 2am with each site having been visited on six separate sessions between March and October.

Surveys were carried out on our treatment works at Billingham and Darlington, a former reservoir on the edge of the North Yorkshire Moors, and two sewage pumping stations in the industrial heart of Middlesbrough. In total, 414 moth species were discovered on our landholdings of which 79 species are of conservation interest.

Our sewage pumping station at Portrack is adjoined by the A19 on one side and Portrack Marsh local wildlife site on the other. Survey results from this year showed that Portrack has an excellent diversity with 180 species being recorded, including the scarce Fen Wainscot. The only record for this species in the north east until recent years was of several moths in a reedbed at Haverton Hill in 1976. Surveys carried out by the Industry Nature Conservation Association (INCA) in 2009 and 2010 found the species to be present in four reedbeds, mostly in the Billingham area. The additional population at Portrack Marsh is the largest to date. This and several other scarce wainscot species which are present on the site indicate the quality of the habitat which is present.

Image: 'Fen Wainscot' - courtesy of Robert Woods



At least three species of moth discovered using our sites are known to be new to the County Durham fauna. These include 'Large Ear' and the 'Lesser Common Rustic'.

Image: 'Large Ear' found at our Broken Scar water treatment works in Darlington - courtesy of

Robert Woods.



One of the most unusual finds was a migrant, ‘Golden Twin-spot’ moth, which is very rarely seen in the northern part of England. This moth had swapped its usual homeland of North Africa and Southern Europe for our treatment works at Billingham.

Image: ‘Golden Twin-spot’ found at Billingham treatment works – courtesy of Robert Woods.



The White Satin is also generally scarce in the north east but was found in good populations in the lower Tees Valley, including our Billingham and Portrack Marsh sites, where it is associated with willows and poplars. If you would like to read more of the report it can be found here. ([link to survey report](#)).

Image: 'White Satin' - courtesy of Robert Woods



## Bats



During site visits and surveys we often discover bat roosts on our operational sites. The year of 2011 was no exception, with the most notable finds this year being the discovery of a Whiskered bat roost in an operational building in Northumberland and the discovery of a large Soprano pipistrelle roost at a site in Staindrop.

The survey at Staindrop was initiated after we received a report from our operations people of bat droppings on a building wall, and was intended to establish whether bats were present and if they were in what number.

The survey, carried out in July, identified just under 600 bats leaving one building over a 2 hour period, which is amazing and just goes to show where wildlife can set up home. The survey results are useful for us to ensure no work takes place in the future without further survey work and mitigation and also gives us a good idea of where we might be able to expect bats to be present on some of our other sites.

## Dragonfly and Butterfly

2011 saw the tenth yearly survey of Dragonfly and Butterfly surveys, with eight of our operational sites being surveyed by our appointed Entomologist. The final report can be found [here](#) (link to survey report).

The year of 2011 started with an exceptionally long and cold Winter which led to an early Spring. The warm, dry temperatures experienced in the first half of the year advanced the emergence of insect species from hibernation by up to six weeks. However the damp and cool weather experienced throughout the Summer did not do any favours for our invertebrates. The year ultimately proved to be very disappointing with very few of even the most common migrants reaching the northern parts of England.

Derwent Reservoir nature reserve had 10 species identified on site however our most productive site turned out to be Westwood sewage treatment works near Ebchester with 15 species of butterfly being recorded on site, including Holly Blue and Purple Hairstreak.



Holly Blue. Two broods recorded this year in fair numbers. This species might be recovering after a loss of numbers locally in the last few years.  
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## **Phase one and NVC habitat surveys**

As part of our continued effort to ensure that habitat surveys of important sites are no more than ten years old we focussed on a number of sites in Teesdale. The information from these surveys will assist in management of these sites and has also helped us to identify sites with biodiversity action plan habitats.

Some of the highlights from this year's survey have been the discovery of notable plant species around some of the reservoir boundaries. These include Adder's-tongue fern, Slender trefoil and large populations of melancholy thistle at Hury Reservoir. The most significant find however, has been the discovery of a rare, species rich mire vegetation on the southern shore of our Hury subsidiary reservoir.

Nearby, at Balderhead Reservoir Native aspen, tea-leaved willow and a population of Adder's-tongue fern were the most noteworthy species found.