

Survey results for 2010

Butterflies and dragonflies

For the tenth consecutive year we have had dragonfly and butterfly surveys completed on a selection of our operational sites. This year we have surveyed nine of our operational sites which included treatment works, pumping stations and service reservoirs within Durham and part of Redcar and Cleveland.

The survey has shown the more common migratory butterfly species such as The Red Admiral and Painted Lady and the migrant dragonflies were present in lower numbers than previous years. However, two operational sites in Redcar and Cleveland had impressive results.



Eston Pumping Station had sixteen species of butterfly including Orange Tip, The Brown Argus and 14 specimens of the Dingy Skipper. Eleven species of Dragonfly were also noted including more common species such as the Common Darter but also five new additions, the Four-spot Chaser, Migrant Hawker, Emperor Dragonfly, Black-tailed Skimmer and the Ruddy Darter.

The Dingy Skipper which is a BAP species was also found at Longnewton Reservoir and Durham Tees Valley Airport STW, with double figure counts noted on all three sites.

The Brown Argus which has been moving gradually North since the 1980s, which was sighted at Eston Pumping Station.

Westworth Reservoir, a disused site on the edge of the North Yorkshire Moors also had eleven species of dragonfly and fourteen species of butterfly. Species seen include the Golden ringed dragonfly, Migrant Hawker and a possible sighting of the Pearl-bordered Fritillary butterfly, which will need further survey work next year to confirm its presence. (Images © Peter Eeles).

Moths

2010 saw the second year of moth surveys completed on four of our operational sites. The surveys are building on the knowledge gained in the surveys completed in 2009 that covered a range of coastal, mid-altitude and upland habitats. The survey in 2009 included 377 species, including 2 species that had not been recorded for more than a century!



Surveys in 2010 were carried out at Howdon sewage treatment works, Whittle Dene water treatment works, Hawthorn water pumping station and Tosson Springs water collection site, with an impressive 371 species being recorded in total.

Whittle Dene proved to be our most diverse site, with 242 species recorded in total including two first records of a species for a site in Northumberland.

Howdon had 128 species, also including two first records for a site in Northumberland. Our expert surveyor predicts that as the nature reserve continues to develop the number of species on this site can only increase.

Tosson Springs had 50 species recorded over three visits and finally, Hawthorn Pumping Station, whilst only a small site still had 133 species. One of the species recorded here was only the second record for a site in County Durham, Hawthorn being the most Northerly site this species is found.

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 focused on a number of sites throughout Northumberland and Durham. 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.

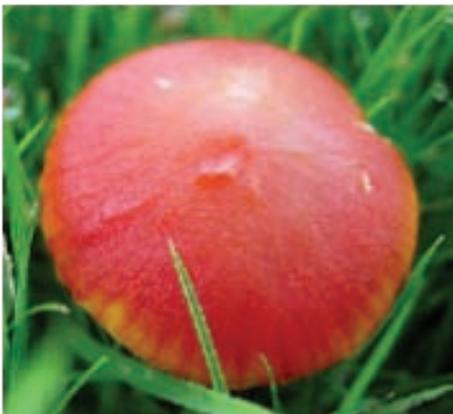
Pond surveys

Continuing on from last year's (2009) detailed surveys we have now received reports on seven more sites that were surveyed using the nationally recognised 'Predictive System for Multimetrics' (known as PSYM). This methodology has been developed by the Environment Agency and the Pond Conservation Trust as a means of assessing the ecological quality of still water habitats.

Analysis of the results have identified 15 ponds that can be classified as having moderate ecological interest whilst 4 meet the criteria as UK Biodiversity Action Plan Priority ponds. Many of the aquatic invertebrates identified in the ponds were fairly common species with the exception of a pond at our Mosswood Water Treatment Works that had a nationally scarce species of lesser water-boatman (*Sigara limitata*).

This information will be passed onto the Pond Conservation Trust to add to their PSYM database.

And following habitat enhancement work on three sites with great crested newts we also completed population assessment surveys by visiting each site six times between March and June. Peak counts for the sites were: Billingham Sewage Treatment Works – 32 (17 in 2009), Cramlington Sewage Treatment Works – 60 (43 in 2009), Tudhoe Mill Sewage Treatment Works – 33 (2 in 2009).



Waxcap grassland surveys

A number of our sites have been recognised as both regionally and nationally important for waxcaps (a type of fungi that grows on unimproved grasslands). Previous surveys have already identified two sites as being of national importance and one site of international importance. The latest survey based on field visits during the autumn of 2010 confirmed two further sites of international importance (Tunstall and Selset Reservoirs) and a further four sites of national importance.

Good examples of waxcap grasslands were found on the dam embankments of Tunstall, Catcleugh, Fontburn and Lockwood Beck. A repeat visit to Hury Reservoir also identified this site as the best waxcap grassland in the north east region and the seventh best site in England.