

September 2007

Biodiversity News in Carmarthenshire

If you have any questions or would like to find out more about any of the items in this newsletter, then please contact Isabel Macho, Biodiversity Officer on 01267 224653 or IMacho@carmarthenshire.gov.uk

What do Fungi do? Philip Jones

One of the most common questions asked during walks looking for fungi is 'can you eat it?', but more interesting questions might be asked such as, why is it *there*? It might be rotting down a fallen branch or leaf (saprotrophic) or it could be killing a tree (parasitic).

A very important role performed by many fungi is to form a fungus–root (mycorrhizal) association with plants. This mycorrhizal symbiotic relationship is hidden under the soil so is seldom considered although 85% or more vascular plants benefit from such a partnership. Mycorrhizas are the chief organ of nutrient uptake by land plants. The fungus mycelium permeating the soil collects minerals (phosphate in particular) and water from a much larger volume of soil than the root system by itself could effectively do. The fungus benefits by receiving carbon (sugars) manufactured by the plant's photosynthetic energies. About 10% of the carbon produced by the plant is transferred to the associated fungus population.

The fungus–root linkage takes a variety of structural forms depending on the plant/fungus species involved. Six or eight general types of mycorrhiza are recognized.

One linkage, the ectomycorrhizal (ECM), forms a sheath covering the fine roots, much like a gloved hand, without the fungus penetrating the root deeper than the outer cortical cells. The plant species involved are mainly woody perennials, the dominant component of forest and woodland ecosystems. The fungal species that are ECM include many of the conspicuous and familiar fungi seen in our woods such as the Amanitas (e.g. Fly-agaric and Deathcap fungi), Boletus (Penny-bun and Cep fungi), the *Russulas* with their bright colours and the 'milk' producing *Lactarius* species.

It is now appreciated that the fungal sheath confers benefits to the roots and plant in general other than just the transfer of soil minerals and water. The surface cells of the ECM sheath consist of specialised cells that probably protect against soil organisms (grazers) as some of these cells (cystidia) are thick walled and encrusted in crystals acting as a physical deterrent (knuckle-duster defence) or thin walled cystidia containing unpleasant chemicals (CS-spray method) or antibiotics and antifungals.

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Waxcap fungi © Isabel Macho

With thanks to *BBC Wildlife Magazine* from which some of this information has been taken. Visit their website for more wildlife news: www.bbcwildlifemagazine.com



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What do Fungi do? *Continued.*

The diversity of fungi found in woodland play a vital role in maintaining a fertile ecosystem and, some fungal fruiting-bodies are GOOD TO EAT!

Philip Jones (philipmad-fun@tiscali.co.uk) is our County Fungi Recorder and member of the Llanelli Naturalists. In Pembrokeshire there is an excellent group 'Pembrokeshire Fungus recording Network (www.pembsfungi.org.uk) and Glamorgan have a FungusRecording group but unfortunately we have nothing in Carmarthenshire. If you are interested in helping form a group please contact Philip. Look out for details of fungal forays during September and October.



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Conservation grazing comes to Llyn Llech Owain - Judith Weatherburn

Grant funding from The Heritage Lottery has enabled Carmarthenshire County Council to purchase additional lowland heath and acid grassland areas adjacent to Llyn Llech Owain Country Park. The increased acreage has allowed grazing to be re-introduced this summer to some of the previously grazed habitats at the Park. When coniferous plantations are cleared, more areas of open ground will remain as lowland heathland, peat bog or acid grassland. These habitats will require management by grazing in order to maintain open areas and prevent succession through scrub to woodland. Using ponies to graze, and trample, the lowland heath, and regeneration areas, will lessen the dominance of the purple moor grass and bracken, allowing the heather and bilberry to flourish again.

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Conservation grazing comes to Llyn Llech Owain - *continued*

Initially three Exmoor ponies, on loan from The Moorland Mousie Trust will be used. The Exmoor, regarded as a race not a breed, is the UK's oldest native pony and one of the UK's rarest mammals. It is thought to be a direct descendant of the original British wild horse, which roamed Britain with the woolly rhinoceros and mammoths 130,000 years ago, and the British Hill Pony.

Exmoor ponies suffered greatly during World War II when the population fell to less than 50 ponies. The breeding population has now risen to more than 400 ponies. Their popularity is increasing as their usefulness is rediscovered, particularly as conservation grazers.

Hardy and adaptable, they thrive on a diet of poor-quality grazing and invasive scrub. The Exmoor selectively grazes grasses, sedges, rushes, and reeds, but generally avoids flowering plants. When grazing is in short supply they browse on scrub and trees and dig up plant roots. The Exmoor pony's role as conservation grazer will also hopefully ensure its future.

Further information from Llyn Llech Owain (01269) 832229

Second Record for National Rarity found in Llanelli

One of Wales' rarest plants has been for the second time in the Llanelli area, ironically one of the most developed parts of the county. Eagle-eyed member of the Llanelli Naturalists Andrew Stephens and his wife spotted the very rare Deptford Pink (*Dianthus armeria*) growing on the verge adjacent to a cycle track within the Millennium Coastal Park. Twenty-one flowering plants were counted, with a similar number still in bud. Normally they would grow between 30 and 60 cm tall but regular mowing means that the ones here are miniature versions only a few centimetres tall. This the second record for the county and only the fifth in Wales.

With bright pink flowers and resembling a small garden Sweet William the plant is a biennial, flowering from July to September. It occurs throughout Europe and has a predominantly southern distribution in the UK, preferring to grow on tracks, waysides, railway cuttings and sometimes dry pastures, preferring disturbed ground and open conditions.

It is classified as Endangered and is protected under the Wildlife & Countryside Act 1981, having declined dramatically in the last 60 years. Habitat destruction – agricultural improvement, afforestation and urban development and abandonment of traditional grazing have contributed to the decline.



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National Moth Night – Deborah Sazer and Martin Lovell

A number of events were held across the county for National Moth Night on August 11th. Here are reports from two of them...

A very successful event was held at Llyn Llech Owain Country Park – 55 species of moths were recorded in just a few hours, including the stunning Peach Blossom (see photo). There were a large number of heathland specialists, including True Lover's Knot, Grass Emerald and the Antler moth, but also species were also attracted that live in the Park's woodlands, wetlands and grasslands. At least 240 moth species were recorded at a number of events across Carmarthenshire.

The Llyn Llech Owain event was followed up with a 'moth breakfast' the next morning, so people had a chance to see what was caught the night before. Park visitors were impressed with the huge range of colours, sizes and forms of these beautiful creatures.

Whilst moths were being identified at Llyn Llech Owain County Park, further north in the county beneath threatening clouds, Carmarthenshire Moth Group members delved deep into Brechfa Forest in quest of one of the target species, Four-spotted Footman.

Although they were unsuccessful in that respect, combined effort over 6 hours with seven light units and nets produced 59 species of macro-moth, including Scarce Silver-lines, Bleached Pug, Oak Hook-tip, Black Arches, Welsh Wave and Yellow-barred Brindle. The highlight of the session was, however, Barred Hook-tip – a moth that was last recorded in Carmarthenshire 36 years ago, in August 1971.

A number of bats took advantage of the moth concentrations, and detectors were brought into use to help identify them.

Occasional light showers well after midnight suppressed moth activity for a spell, but conditions allowed recording to continue until after 3 a.m., when the heavens released a more formidable consignment and brought the session to an abrupt halt.

National Moth Night is an annual celebration of moths and moth recording, run by Atropos (the butterfly, moth and dragonfly journal, see www.atropos.info) and Butterfly Conservation (www.butterfly-conservation.org). Moth 'traps' are set up to record moths across the country, to create by far the largest single-night snapshot of insects in Britain.

Moths are vital to our biodiversity. They are pollinators for many plants, and their caterpillars recycle nutrients back into the soil. They are vital food for many birds, all bats and many other mammals, insects and spiders.

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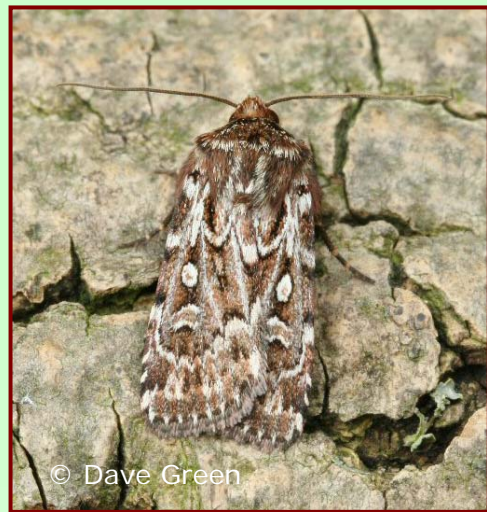
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National Moth Night – *continued*

Moths are vital to our biodiversity. They are pollinators for many plants, and their caterpillars recycle nutrients back into the soil. They are vital food for many birds, all bats and many other mammals, insects and spiders. A large number of moths are in serious trouble – recent research suggests that two-thirds of common moth species are in decline.

Whether you are a complete beginner or an expert, you can find out more about moths and moth-recording activities via the brand new 'Moths Count' project on www.mothscount.org. Moths Count aims to encourage interest in moths throughout the UK and to establish an ongoing National Moth Recording Scheme to improve our knowledge and conservation of the 900+ UK species of larger moths.

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© Dave Green

Burry Port harbour grassland blooms again!

For the past 3 years a small area of Burry Port harbour grasslands as been managed as hay meadow and allow to flower and set seed before being cut and the grass removed. Normally cut regularly, this area of grassland was recognised as being species rich and the council agreed to manage a small area for its biodiversity value. This management was not universally welcomed within Burry Port and time and effort has had to be put in to explain the importance of species-rich grassland in the county and benefits of 'wilder' areas in more built-up habitats. An information board has been erected to raise awareness about the habitat and walk held for the public. This year it was lovely to see a diversity of flowers in the grassland good numbers of pyramidal orchids and wild onion – hopefully maintaining the management will encourage further diversity in the future.



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Bat training for tree workers and woodland managers

A training session for tree workers and woodland managers was held in Abergorlech in August. Bat ecologist Richard Crompton from Wildwood Ecology led an informative and well received session attended by 14 people. He raised awareness about the importance of trees for bats, the protection given to bats and the splits, cracks and holes to look out for in trees that indicate that it may be a roost for bats. After a session indoors the group went up into the woods at Abergorlech to look for signs in the trees there. It is hoped that sessions such as these targeting key sectors will help ensure that some of our most important species are considered by the people that can have a significant positive effect in their conservation.



Morfa Berwig Water Vole Project

During Tidy Wales Week in July a tidy up was held at the Morfa Berwig Water Vole Project site. Led by Yvonne Jones of Keep Wales Tidy, eight volunteers collected over 40 bags of rubbish, tyres, gas canisters and even a fridge. Much of the rubbish was in ditch-side habitat used by the water vole, a key species of the site so as well as making the site cleaner and safer the water voles have benefited as well (see picture on next page).

A competition to design a logo for the Llanelli Water Vole Action Group was won by Elliot Jones of Swiss Valley Primary School. All of the winning school entries were displayed at the Wildfowl and Wetland Trust and the school had a pond dipping session at the Trust.

The Morfa Berwig Water Vole Project is moving ahead. In addition to funding from the Welsh Assembly Government the project has now secured grant funding from Cwm Environmental (through Grantscape) that means that the



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Morfa Berwig Water Vole Project - continued

path and bridge element of the project can go ahead. This will improve public access on to the site and raise awareness of the importance of the site for biodiversity. As well as water voles, otters use the site as well as a range of birds and invertebrates. Dan Forman from Swansea University and students are carrying out a survey of the water voles on the site and collecting other biological data whilst they are on site.



There are plenty of signs of water voles with latrines and feeding signs being regularly found. All this information will help inform future development which must ensure that the water voles and their habitat are safeguarded

Events Programme

Saturday 1st & Sunday 2nd. An evening of bird watching with a warden at the Wildfowl & Wetland Trust. Buffet included. 18.30 until dusk. £7.50. Call 01554 741087 for more information.

Saturday 8th & Sunday 9th. Celebrate the muddy side of wetlands, including walks, mud sculptures, talks and much more at the Wildfowl & Wetlands Trust. Call 01554 741087 for more information.

Sunday 9th. Fungal foray with Philip Jones at Gelli Aur CP. For more details ring 01558 668885.

Saturday 15th. Wildlife Trust. Allt Goch Woodlands. Meet at Pont Pwll Defaid (SN7583111) at 14.00 or Llangadog Railway Station at 13.45. For more details contact Denys Smith 01558 822152.

Wednesday 26th, 17.30. Discover the amazing sights and sounds as the advancing tide pushes the birds closer to the hides. Wildfowl & Wetland Trust. Followed by a BBQ. £8.50. Call 01554 741087 for more information.

Saturday 29th. Huntsman Chemical Company, Bynea. A meeting of the Llanelli Naturalists by invitation of Rob Collins from the company's Conservation Group. Meet at the site entrance SS554987 at 14.00. For more information contact Richard Pryce 01554 775847.