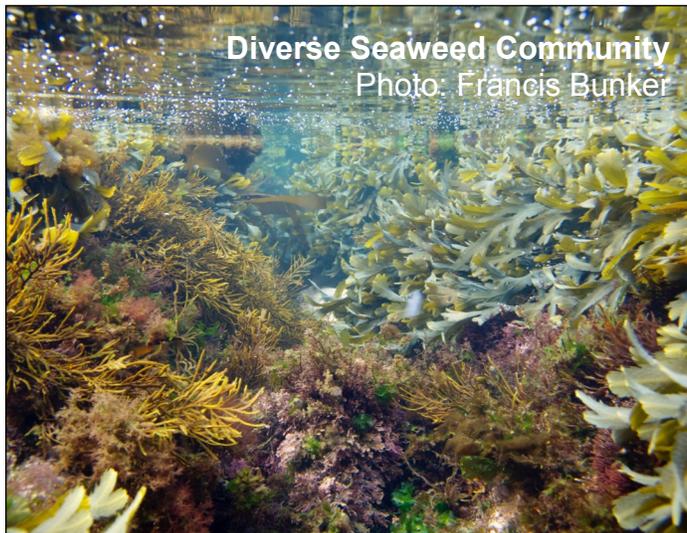


Year of the Sea

This year Welsh Government's tourist team, Visit Wales, have made their theme 'the Year of the Sea'. They are promoting Wales as a 21st century coastal destination (See: <https://businesswales.gov.wales/zones/tourism/YoS2018>). The seas around Pembrokeshire have been recognised as special in a European context for having outstanding examples of habitats and species like rocky reefs, mudflats, seals and lamprey (<http://www.pembrokeshiremarinesac.org.uk/>). However, only five of the fifteen features of the Pembrokeshire Marine Special Area of Conservation (SAC) are reported as being in favourable condition in a recently published assessment by Natural Resources Wales (<https://naturalresources.wales/media/683652/pembrokeshire-marine-sac-ica-2018.pdf>).



In the Year of the Sea, there are no areas in our local seas (or indeed the entirety of Welsh seas) that are fully protected. Our Skomer Marine Conservation Zone (MCZ) with its on-site team and long term data sets has given us a flavour of how protection can increase diversity and provide a reservoir for economically harvestable species. Although potting and angling continue in the MCZ, no bottom trawled gear is allowed. Scallop numbers have increased markedly and the sediments are some of the most diverse in Wales. However, sea fans (*Eunicella verrucosa*) in monitored areas of

PEMBROKESHIRE NATURE PARTNERSHIP



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Volume 15 Issue 1
Spring 2018

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the MCZ are decreasing. For this and other species, an understanding of their normal community functioning can only be achieved by having a fully undisturbed area to study. Currently there are no such areas in the MCZ.

Wooltack Point

Photo: Trevor Theobald



In this Year of the Sea, let us celebrate our wonderful ocean and coast with all the economic benefits they bring through tourism and fishery, but let's also take action to return the sea to a resilient and diverse ecosystem. You could tell your local cafe why you don't want a drink in a plastic bottle; ask your favourite restaurant how the shellfish on their menu was caught; make sure the B&B next door promotes the Marine SAC as a reason to visit Pembrokeshire; Join the Marine Conservation Society (<https://www.mcsuk.org/join>); write to your assembly Member and the Cabinet Secretary asking for the designation of some Highly Protected Marine Areas (HPMA) in Wales.

Wouldn't it be amazing if the legacy of this Year of the Sea was a better protected, more diverse and resilient marine environment?

Ant Rogers

Biodiversity Implementation Officer

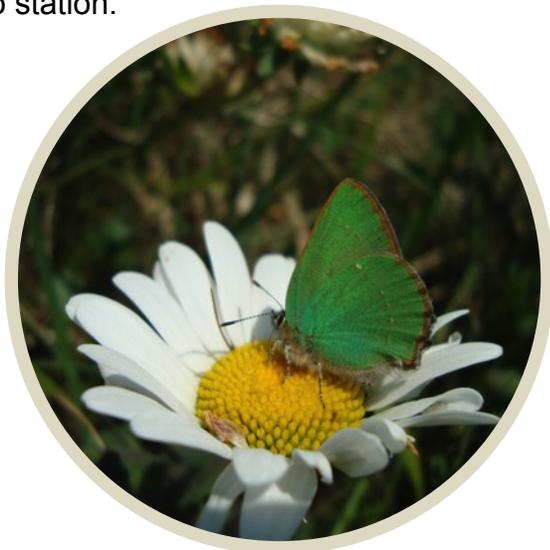
The St David's Pollinator Trail

The value of insect pollination to UK agriculture is over £430 million each year and it would cost us £1.8 billion each year if we had to do the job ourselves! Yet, due to loss of habitat and the overuse of pesticides, our pollinators are in severe decline.

There are now many fantastic initiatives to educate people about the importance of pollinators and what we can do to help them: Welsh Government's Bee Friendly, Buglife's Bee Lines and Heritage Lottery funded Polli:Nation to name just a few! The Bug Farm is the leading partner on a new and exciting project called The St Davids Pollinator Trail. This two year project, funded by Welsh Government's Tourism Product Innovation Fund and Biodiversity Solutions, aims to get families out and about exploring the hidden lives of our pollinators. The project comes off the back of a recent, successful art-science collaboration that we have been involved in - the Crosspollination Project, which is showing at The Bug Farm until March 2018.



St Davids, although the smallest city in the UK, is a hive of activity. We welcome over 150,000 visitors each year and the city is buzzing with forward thinking, sustainable and award-winning businesses as well as spectacular natural habitats. In the first phase of the project, we plan to link many of these businesses and habitats together, particularly those which are relevant way-points for visitors to the area. Working with Welsh artists, scientists and communicators, a 'station' will be created at each business, or area of habitat to showcase the wonderful world of insect pollinators and the importance of wildflower habitat in supporting them. An interactive trail, with map and spotter guide will take people and pollinators from station to station.



Depending on the site, the station may be an area of wildflower meadow, a pollinator friendly window box, or even a bug hotel, each supported by an educational, bilingual interpretation board and a work of art. Each board will highlight one insect pollinator species likely to be found at the site. The board will also include a call to action; a take-home message or activity, for those following the trail. There will also be a question to answer at each station. Completed trail packs can be brought to The Bug Farm to be stamped as complete, earning the participant a small prize.

Phase two of the project will include pollinator feasts, invertebrate training workshops,

history of farming exhibitions and much, much more!

As part of the project, we are applying for 'Bee Friendly' certification for St Davids. The new/reinvigorated areas of pollinator habitat that are part of the trail, along with existing pollinator habitat already on the peninsula will all help to fulfill the criteria. Similarly, if you are happy to commit to not using pesticides in your garden, please email us to confirm this. The plan is for St Davids to be Wales' first Bee Friendly City! If anyone has any further areas of pollinator habitat, food, or community pollinator projects they would like us to include then please email us.

For more information please get in touch.

Sarah Sharpe.

The Bug Farm

sarah.sharpe@thebugfarm.co.uk



Dr. Beynon's
Bug Farm



Biodiversity
Solutions



Winter Seed Crop Project at Llangloffan Fen

Britain's farmland birds have suffered alarming declines over the last twenty-five years with some species having become locally extinct and many others considered threatened. It would appear that their decrease in numbers coincides with a period of rapid intensification in farming in the mid-1970s, and they have continued to steadily drop in numbers ever since. Another reason for these declines is lack of food during winter which causes high levels of mortality.

At the Wildlife Trust's Llangloffan Fen nature reserve there are 7 acres of semi-improved grassland that is currently grazed by cattle and has further opportunities for better habitat management. Through discussions with the Pembrokeshire Bird Group and other



conservation organisations, the lack of winter sources of seed for birds is a real concern in this high pastureland environment.



To help sustain and aid the recovery of bird species over winter months in this area, the Wildlife Trust is looking to sow a 2-acre area of the grassland as a winter seed crop. A 'BumbleBird' seed mix will be sown which will provide a food resource for farmland birds during the winter months of 2018/2019 and 2019/2020. It will also provide an abundant supply of pollen and nectar rich flowers between early and late summer for a range of nectar feeding insects, including butterflies and bumblebees (other species that are in need of support).

The Wildlife Trust has been fortunate to receive funding from the Pembrokeshire Bird Group and The Pembrokeshire Nature Partnership for this project.

The kinds of species that could be served well by additional seed sources are the passerines group such as ground-feeding skylarks, finches (several species – including linnet and chaffinch) and buntings (such as reed bunting and also hopefully yellowhammer – if they are in the area). Birds like house and tree sparrows (there used to be a local breeding/wintering

population near Llangloffan Fen) could hopefully also find considerable benefit from ruderal type plant seed sources.

Research suggest that a mixed farming landscape which combines stock grazing with an arable regime that maintains some over-winter stubbles will support higher numbers and a higher species diversity of field-feeding birds than landscapes dominated by autumn-sown crops or pasture. Over-winter stubbles are extremely important feeding habitats for seed-eating passerines. On set-aside land, regeneration of a vegetation cover from stubble is thus likely to yield much greater benefits for wintering seed-eating birds than sown grass covers.

Nathan Walton
Wildlife Trust Officer
for Pembrokeshire



An Excursion into the World of Molecular Biology

Much has happened in the two years since the Pembrokeshire Nature Partnership (PNP) gave us a helping hand in our plan to get involved in the investigation of fungal DNA. PNP support enabled us to join a pilot scheme to beta-test the Bento Lab - a remarkable package which combines the essential tools for molecular biology into one compact unit.

The beta-test instrument was returned to the suppliers on completion of a 6-month trial. Now, following an extended period of development, we expect to receive one of the very first production models in the next few weeks.

Thanks to training and support from Gareth Griffith at Aberystwyth University, and additional materials and funding from the "Lost





and Found” project run by the Royal Botanic Gardens, Kew (RBGK) and the British Mycological Society (BMS), our work programme has included a Pembrokeshire survey of blackening waxcap species and, currently, a Wales-wide study of variants of the olive earthtongue (*Microglossum olivaceum*) supported by Natural Resources Wales.

We are now in a position to extract DNA from fungi, amplify the DNA barcode portion, then purify the sample so that it can be sent to Aberystwyth for sequencing.

This opens up opportunities for us to provide a volunteer-based scientific contribution to mycological studies both locally and nationally. Following our example, fungus groups across the UK, with the support of the RBGK and the BMS, are being encouraged to look more closely at ways in which they can become actively involved in the use of molecular techniques to support their projects.

David Harries
Pembrokeshire Fungus
Recording Network



Protected Trees Felled in Freshwater East

The Pembrokeshire Coast National Park Authority is appealing for information after dozens of protected trees in Freshwater East were illegally felled and abandoned.

The trees, which are mostly ash, sycamore and hawthorn, are part of a woodland which is protected by a Tree Preservation Order (TPO). Most of the trees are owned by the National Park Authority but some belong to a local resident.

TPOs protect trees for amenity, public enjoyment or their environmental benefit and prohibit changes such as cutting down, topping, lopping or uprooting without permission from the local planning authority.

Park Authority Director of Park Direction and Planning, Jane Gibson said: “We take this type of breach very seriously and local police have already made door to door enquiries. We are appealing for anyone who has information about the felling of these trees to come forward. This is the worst breach of a TPO I have ever encountered. Not only has someone felled trees that were protected, they have carried out these unauthorised works on land that didn’t belong to them. As the trees have simply been left, the Park Authority will have to undertake remedial work to selectively clear, coppice and replant the site at significant cost”.

Park Authority Warden Manager (South) Tim Jones added: “Many of the trees were located in the Freshwater East Local Nature Reserve (LNR) and local people campaigned long and hard for the TPO in order to protect the woodland from development”.

For more information on trees in the Pembrokeshire Coast National Park, including an interactive map of TPOs, please visit www.pembrokeshirecoast.wales/trees.

Anyone with information about the unauthorised felling should contact the National Park Authority on 01646 624800 quoting Planning Enforcement Breach Reference: EC17/0149.

Medi George
Pembrokeshire Coast
National Park Authority



Parc Cenedlaethol Arfordir Penfro
Pembrokeshire Coast National Park



Biodiversity Events

February—May



Date	Title	Information	Contact
14 th – 21 st Feb	National Nest Box Week	NNBW aims to encourage everyone to put up nest boxes in their local area in order to promote and enhance biodiversity and conservation of our breeding birds and wildlife. More information available here: https://www.bto.org/about-birds/nnbw	
21st Feb 12:00— 14:00	Beach Clean at Freshwater West	Grab a litter picker and help us care for this beautiful stretch of coastline with our pre-season beach cleans. Meet at Freshwater West car park	National Trust stackpole.booking@nationaltrust.org.uk
7 th March 19:30 – 21:00	The People's Orchard. Catholic Church Hall Cardigan.	Join the South Ceredigion Local Group of the Wildlife Trust for a talk on the People's Orchard Project in St Dogmaels by Nia Siggins and/or Sophie Jenkins.	Margaret Powell 01239 621512
20 th March 19:15 – 21:00	The Mystery of Bird Migration. Foundry House Community Centre, Pembroke.	Join the South Pembrokeshire local group for a talk by David Saunders about the mystery of bird migration. All are welcome and entry fee is £1.50 for members of WTSWW and £2.50 for non members.	Lynda: 01834 810307 or Christine: 01646 673912
23 rd – 29 th March	Invasive Species Week	Get involved in the national week of action to tackle Invasive Non-Native Species. More information available here: http://www.nonnativespecies.org/index.cfm?sectionid=132	
28 th March 13:00 – 16:00	Steve Thorp Workshop Oriell y Parc.	Writing Landscape and Seascape poetry. More details here: www.pembrokeshirecoast.wales	Booking Advisable 01437 720392
29 th March 10:30	Foraging Oriell y Parc, St David's	Food Foraging with Julia Horton-Powdrill. More details here: www.pembrokeshirecoast.wales	Booking Essential 01437 720392
30 th March 18:30 – 20:00	Steve Thorp Workshop Oriell y Parc.	Earth Songs – An evening of poetry celebrating earth and ocean. More details here: www.pembrokeshirecoast.wales	Booking Essential 01437 720392
5 th April 10:30	Foraging Oriell y Parc.	Food Foraging with Julia Horton-Powdrill. More details here: www.pembrokeshirecoast.wales	Booking Essential 01437 720392
5 th April 13:00 – 16:00	Steve Thorp Workshop Oriell y Parc.	Climate Minds – a conversation. More details here: www.pembrokeshirecoast.wales	Booking Advisable 01437 720392
5 th April 14:00 – 16:00	My Family and Stackpole Walled Garden – a Ranger's view	Haydn Garlick. More details here: www.pembrokeshirecoast.wales	Booking Essential 01437 720392
7 th April 11:00 – 15:00	Honey Bee Fun at Castell Henllys	More details here: www.pembrokeshirecoast.wales	For information 01239 891319
8 th April 09:30 – 16:00	Castlemartin on Foot	Over 18s only. More details here: www.pembrokeshirecoast.wales	Booking Essential 01437 720392

Biodiversity Events February—May



Date	Title	Information	Contact
10 th April 19:30 – 21:00	Twilight at Stackpole	In partnership with the National Trust. More details here: www.pembrokeshirecoast.wales	Booking Essential 01437 720392
11 th April 19:30 – 21:00	Brilliant Bats at Carew Castle	More details here: www.pembrokeshirecoast.wales	Booking Essential 01437 720392
12 th April 10:30	Foraging Oriel y Parc, St David's	Food Foraging with Julia Horton-Powdrill. More details here: www.pembrokeshirecoast.wales	Booking Essential 01437 720392
22 nd April 15:00	Beach clean at Newgale	With Surfers against Sewage. More details here: www.pembrokeshirecoast.wales	Booking Advisable 01437 720392
25 th April 19:30	Wildlife Gardening at Catsell Henllys	An evening talk. More details here: www.pembrokeshirecoast.wales	For information 01239 891319
28 th April 11:00 – 15:00	Honey Bee Fun at Castell Henllys	More details here: www.pembrokeshirecoast.wales	For information 01239 891319
13 th May 09:30 – 13:30	Castlemartin on Foot	A half day tour. Over 18s only. More details here: www.pembrokeshirecoast.wales	Booking Essential 01437 720392
22 nd May	International Day for Biological Diversity	The United Nations has proclaimed May 22 The International Day for Biological Diversity (IDB) to increase understanding and awareness of biodiversity issues. More information available here: https://www.cbd.int/idb/	
23 rd May 14:00 – 16:00	Wildflower Walk at Freshwater East	With Vicky Tomlinson. More details here: www.pembrokeshirecoast.wales	Booking Essential 01437 720392
24 th May 10:30	Foraging Oriel y Parc, St David's	Food Foraging with Julia Horton-Powdrill. More details here: www.pembrokeshirecoast.wales	Booking Essential 01437 720392
26 th May 11:00 – 15:00	Honey Bee Fun at Castell Henllys	More details here: www.pembrokeshirecoast.wales	For information 01239 891319
29 th May 19:30 – 21:00	Twilight at Stackpole	More details here: www.pembrokeshirecoast.wales	Booking Essential 01437 720392
30 th May 19:30 – 21:00	Twilight at Colby	More details here: www.pembrokeshirecoast.wales	Booking Essential 01834 811885

PNP Contact Details

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Pembrokeshire Nature Partnership website:

www.pembrokeshire.gov.uk (search - biodiversity)

Wales Biodiversity website:

www.biodiversitywales.org.uk

Nature Newsletters

Mae'r cylch-lythyr hwn ar gael yng Nghymraeg, cysylltwch â Ant am gopi cymraeg.

PNP would like to thank all those who contributed to this newsletter. If you would like to write an article for the next newsletter please contact Ant.

Opinions expressed in this newsletter are those of the author of the article and may not represent the position of the wider Partnership or its constituent members.

PNP Members

amphibian and reptile
conservation



gwarchod

amffibiaid ac ymlusgiaid



Bumblebee
Conservation
Trust



cadwch keep
gymru'n wales
daclus tidy



Cyfoeth
Naturiol
Cymru
Natural
Resources
Wales



Ymddiriedolaeth
Genedlaethol
National Trust



Parc Cenedlaethol Arfordir Penfro
Pembrokeshire Coast National Park



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government



WEST WALES
BIODIVERSITY INFORMATION CENTRE
CANOLFAN WYBODAETH BIOAMRYWIAETH
GORLLEWIN CYMRU



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