

## Significant Loss of Important Marine Habitat in the Milford Haven Waterway

Natural Resources Wales (NRW) marine monitoring staff have recorded a large and rapid decline of live maerl on Wales' only remaining maerl bed in the Milford Haven Waterway.

Maerl is a collective term for free-living species of red seaweed with hard, chalky skeletons that form little pink twig-like structures. In the right conditions it forms extensive beds of interlocking "twigs" that provides a complex habitat for a diverse range of animals and plants, including the young of commercial fish species.

Maerl grows very slowly - usually less than one millimetre a year - and beds take thousands of years to form. It is known from radio carbon dating that the bed in Milford Haven is at least 2000 years old. This slow growth rate makes maerl highly susceptible to environmental change and physical disturbance. The maerl bed is of high conservation importance and is an important component of the Pembrokeshire Marine Special Area of Conservation, so NRW has been monitoring the maerl bed since 2005.

Photo: Rohan Holt, NRW



## PEMBROKESHIRE NATURE PARTNERSHIP



## PARTNERIAETH NATUR SIR BENFRO

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A recent video survey showed that more than 90% of the bed's live maerl has been lost. This is a large and rapid loss, which needs urgent attention. As a result, NRW will work with local stakeholders to look into the possible causes of the decline and once these are better understood they will work together to reduce any future impacts which should improve conditions for the maerl's recovery.

## Natural Resources Wales



Photo: Rohan Holt, NRW

## Community Woodland Project in Tenby

The aim of this Nature Partnership funded project was to improve the biodiversity, conservation, access and management of the Scots-borough community woodland area to the rear of Tenby's two primary schools.

Both schools have benefited from the targeted funds which have enabled them to see the immediate and tangible benefits of improved access and increased habitat creation, as well as securing the longer-term benefits of having a structured management plan for the wood and playing field boundaries. The children use the woodlands for outdoor learning every week and hope to harvest the fruit from over 300 newly planted native fruit trees in the future.



The project has seen in kind contributions of over 150 hours from Keep Wales tidy staff, Tree Solutions, Pembrokeshire Coast National Park voluntary wardens and from staff and parents in both schools, as well as the pupils themselves, with every pupil in Ysgol Hafan Y Mor School having been involved in practical elements of this project as well as wider connected class room based learning.

The project and associated work has been included in supporting evidence for both the schools to successfully apply for their relevant Eco-School's awards, including Hafan Y Mor which has now received its first Eco-Schools Green Flag.

**Kiri Howell**

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## SWEPT Summary May 2019

***Using citizen science in the marine environment to raise awareness of land run-off and seek improvements to water quality.***

SWEPT (Surveying the Waterway Environment for Pollution Threats) emerged from a need for more localised information on nitrate pollution entering the Milford Haven waterway and improved awareness of





the impacts of land run-off on the marine environment. Marine features of the Pembrokeshire Marine Special Area of Conservation (SAC) are in unfavourable condition due in part to nutrient pollution from agricultural run-off and sewage. The waterway has also failed to meet 'Good' status which is required for Water Framework Directive compliance by 2027. More data was considered helpful to NRW to better identify problem areas and help to best target effective management effort.

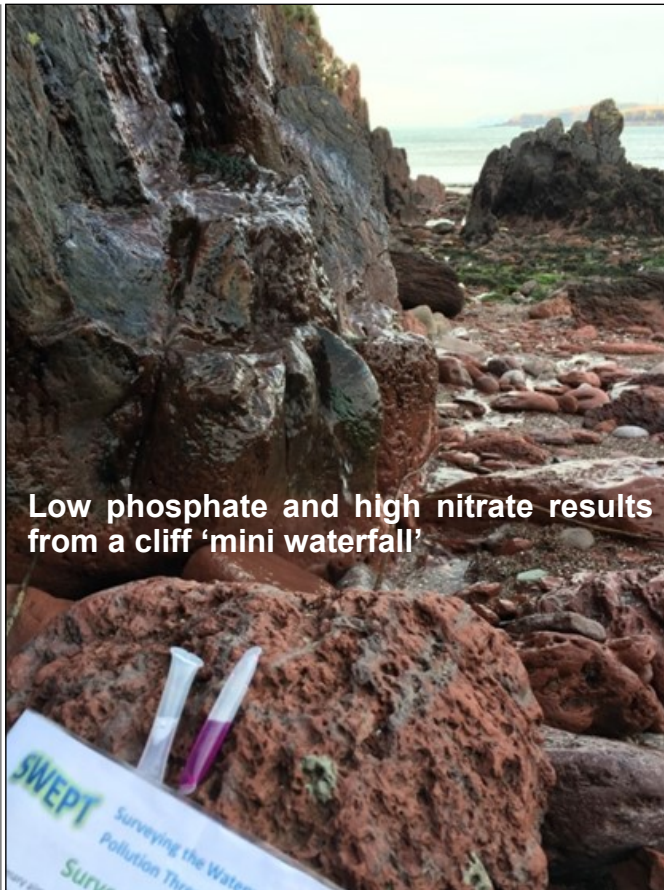
Social media and local networks were utilised to recruit volunteers for the project; the level of interest took all by surprise with over 100 volunteers involved in surveys. Following training and provision of survey packs, volunteer 'citizen scientists' carried out repeat monthly surveys of their allocated coastal stretches between November 2018 and February 2019. Surveys were on publicly accessible land, either the foreshore or adjacent paths. All freshwater inputs to the marine environment were logged, photographed, and a subset tested for nitrate and phosphate levels (847 tests for each were recorded). Survey sessions were also conducted with educational groups, and during canoeing trips to hard-to-reach areas.

### **SWEPT volunteers at the project feedback event**



SWEPT took its methodology from the inspiring Freshwater Habitats Trust *Clean Water for Wildlife* project (2015-2017) using accurate cheap and easy to use Kyoritsu PackTest kits. Results saw a myriad of different freshwater inputs from seeps and mini-waterfalls to pipes and streams. The number

### **Low phosphate and high nitrate results from a cliff 'mini waterfall'**



of inputs can obviously vary according to rainfall; December had the greatest number logged at 320. Nitrate levels were very high in many places. Phosphate was generally low throughout. In addition to the water quality results, volunteers also collected information on interesting finds, marine litter, non-natives and any other pollution threats such as oil or fly tipping.

A feedback event for volunteers was held in May and potential next steps have been discussed with NRW. A final project report will be available in the autumn, along with transferable methodologies and guidance in order to easily replicate SWEPT in other areas.

SWEPT has proved popular with participants and undoubtedly raised awareness of the issue of land run-off affecting the marine environment. We should all be more aware of our close connection to the sea and take actions to look after it and its wildlife, whether that is being careful of how we dispose of our waste, mindful of what we flush down drains, or how we use the sea and interact with wildlife.



SWEPT has been led by the Pembrokeshire Marine Special Area of Conservation (SAC) Officer and co-delivered with the West Wales Rivers Trust, Pembrokeshire Coastal Forum and the Darwin Centre. It has been funded by a grant from Natural Resources Wales (NRW).

**Sue Burton**

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**SWEPT**

## Swift Box Project 2019

Swifts, once common, have suffered a 53% decrease in their breeding numbers in the UK between 1995 and 2016. Numerous birds used to be seen wheeling over Pembrokeshire town in summer but now only a few pairs are seen each year. It is thought that lack of suitable nest sites is partly to blame. The British Trust for Ornithology say that modern building design and refurbishment of old buildings deprive swifts of nest sites and the provision of nest boxes and integration of potential nest sites into new buildings and renovations are strongly supported by conservation organisations.

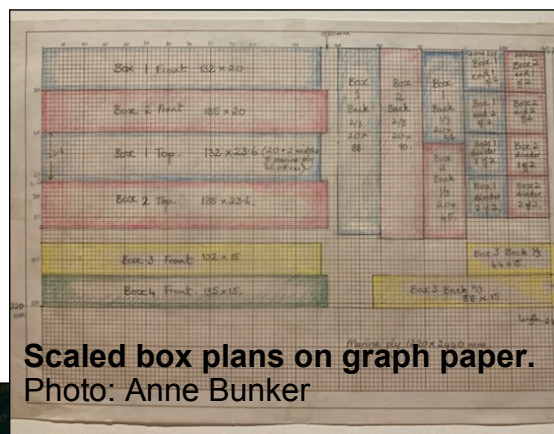


**Swift on the wing.**

Photo Roger Wyatt, Action for Swifts

The renovation of the bells in St. Mary's Church tower in Pembrokeshire has given us the opportunity to positively contribute to swift conservation by installing nest boxes and employing some inventive modern technology.

A grant for £300 was secured from the Pembrokeshire Nature Partnership to buy materials to make two rows of three swift boxes in two windows (12 nesting units). Boxes were designed to fit behind the louvres of the north and east facing windows at the top of the tower with the help of 'Action for Swifts' <http://actionforswifts.blogspot.com>.



**Scaled box plans on graph paper.**

Photo: Anne Bunker



**Inside the boxes with 'nest forms'**

Photo: Anne Bunker

The eight bells of St. Mary's church are high up in the tower and the windows allow their sound to be transmitted across the town and beyond. To access the windows and safely move a ladder around it's a good idea to ring the bells down so they are in a safe position. Ringing eight bells down, measuring and ringing eight bells up again took only an hour or so but during the measuring the enormity of the task began to dawn. The window openings in the Norman tower are really uneven and covered with rusty chicken wire. Nothing can be fixed in to the fabric of the church without a faculty (church planning permission).

Approximately 80 people hours of work later the boxes were in, temporarily fixed to the wooden frames that hold the chicken wire (preventing pigeon access to the tower).





*Action for Swifts* says that if you want to attract swifts to nest in new areas you need to play swift attraction calls. This is because young swifts breeding for the first time find potential nest sites by following swifts which are already breeding. A duet of two swifts calling 'sree-ree' to each other is available to download as an MP3 file from the website, along with instructions on setting up a small amplifier and speakers. Swifts are most active in good weather and in the early and late evening so this is when the swift calls will be played. If you stand in the church yard and listen carefully you might be able to hear the calls playing amongst the background noise of traffic, the squawking pigeon chicks and the blackbird loudly proclaiming his ecclesiastical territory.



**Testing the amplifier kit in the kitchen.**  
Photo: Anne Bunker

Swifts were recorded in Pembrokeshire in early May (the first one seen over Pembroke was on 11<sup>th</sup>) so fingers crossed that some will be interested in setting up home in their new boxes.

A lot of people contributed their time, especially Stewart, whose skills and experience made it all work.

**Lessons learnt:** Marine ply is very heavy, making the boxes difficult to support. The design of the removable back panel could be improved as they are currently difficult to get



**Boxes in the north and east windows.**  
Photo: David Levell

on and off. As with most building type projects, there was an underestimation of time required by a factor of about ten!

**Thanks** to Trevor Theobald, Stuart Ryan, Peter Bickerton, Peter Haywood, Patrick Bunker, Francis Bunker (who thinks that playing swift calls endlessly in the kitchen is a form of torture), Denis Bunker, Nathan Sherwood, Paul Culyer, Gwillem Ruis, Nigel Jones, Dave Levell, Ant Rogers, Michelle Webber and to the church and the bell ringers for supporting the project.

**Anne Bunker**

### **Pembrokeshire's Nature is Vital for a Flourishing Tourism Industry.**

Research conducted on behalf of the Pembrokeshire Nature Partnership shows that a good quality natural environment is greatly valued by our visitors and its protection is therefore key to the sustainability of the visitor economy. The Partnership would like to thank its members for engaging others in the business survey and joining discussion about visitor giving and the natural environment at a number of events throughout 2018.

The research was conducted as part of a feasibility study to look into the viability of setting up a voluntary Visitor Giving Scheme in Pembrokeshire that would support conservation efforts to help protect nature and so that it can be enjoyed by visitors and residents alike now



and in future generations. This project was funded by LEADER.



The visitor survey typically confirmed the importance of the natural environment in drawing visitors to the County. It showed that people particularly valued Pembrokeshire's iconic species such as puffins and seals, as well as appreciating the beautiful landscape that is to be found in Pembrokeshire and its Coastal National Park.

Over two thirds of visitors surveyed said that they would be willing to donate to a voluntary scheme, and 32% of respondents said they would be more likely to choose a business such as an accommodation or recreation provider who was a part of a scheme. 80% of visitors were comfortable with donating to a general fund to improve the conservation status of the wider environment, rather than being specific to a site they visit or a targeted campaign.



92% of the trade respondents agreed that the natural environment was 'very important' to their business. 92% of businesses saw a benefit to their business being associated with fundraising schemes that support the environment and would be happy to signpost visitors to such an initiative. Both visitors and businesses strongly believed that it was very important to know how any money raised would be spent.

Although there are currently no plans to develop a voluntary visitor giving scheme, the research showed that a good quality environment is highly valued by visitors and that working together to help protect it is essential. There have been many superb initiatives run by local organisations and individuals such as beach cleans and litter picks that are helping keep Pembrokeshire's beaches and local environment special. However recent reports show that our natural environment is under threat and that there is an urgent need to do more to help protect as well as regenerate our nature and landscapes.

For more information please contact Anthony Rogers from the Pembrokeshire Nature Partnership -

[anthony.rogers@pembrokeshire.gov.uk](mailto:anthony.rogers@pembrokeshire.gov.uk)

**Hannah Buck**  
PCNPA



**Turn Down the Lights and  
Discover the Benefits Dark  
Skies Bring**

Officers from the Pembrokeshire Coast National Park Authority, Pembrokeshire County Council and Natural Resources Wales are encouraging members of the public, businesses and organisations to join a county-wide effort to reduce light pollution.





As well as giving people a clearer view of the dark skies above, reducing light pollution can also benefit wildlife and improve your health.

There are eight designated Dark Sky Discovery Sites in the Pembrokeshire Coast National Park. These are some of the best places to experience the night sky, away from areas where the stars are obscured by light pollution, but are easy to access.

Park Authority Health and Tourism Policy Officer, Hannah Buck said: “It is difficult to capture in words the experience that people gain from looking up at the sky on a clear night in a place that is free from light pollution, where the stars and the magnificence of the Milky Way can be appreciated.

“Light pollution not only obscures our ability to see the stars, it also wastes energy which in turn can lead to increased levels of greenhouse gas emissions. This has been proven

to have a negative impact on human health and can have significant impacts on wildlife.” Park Authority Biodiversity Officer, Sarah Mellor added: A number of our bat species such as horseshoe bats are very sensitive to artificial lighting and will actively avoid lit areas. Light pollution can completely change their environment and can lead to them abandoning roosts or delaying their emergence from roosts reducing their foraging time. In some cases lighting can even cut them off entirely from the best insect-rich feeding areas.

“Birds can also be affected. The Pembrokeshire islands of Skomer and Skokholm are home to 350,000 pairs of Manx shearwaters. Each year the young emerge from their nest burrows in September to begin their migration to South America. These inexperienced birds are easily put off course by artificial lighting on the mainland and on ships. Each year volunteers help to rescue grounded Manx shearwaters and release them back



**Poppit Sands is one of Pembrokeshire's eight Dark Sky Discovery sites.**  
Photo: PCNPA



at sea to continue their journey.”

One of the simplest ways to show your support for the effort to reduce light pollution is to take part in Earth Hour, which sees lights across the globe turned off from 8.30pm-9.30pm on 30 March. Businesses and landmarks around the world also take part in the initiative, switching off their lights to help make a noise for the Earth Hour movement. For more information on Earth Hour visit [www.earthhour.org](http://www.earthhour.org).

Any local residents, community councils or businesses that would like to know about dark skies or light pollution should contact Hannah Buck by emailing: [hannahb@pembrokeshirecoast.org.uk](mailto:hannahb@pembrokeshirecoast.org.uk).

To find out more about the Dark Sky Discovery sites in the Pembrokeshire Coast National Park visit: [www.discoveryinthedark.wales/pembrokeshire](http://www.discoveryinthedark.wales/pembrokeshire).

PCNPA

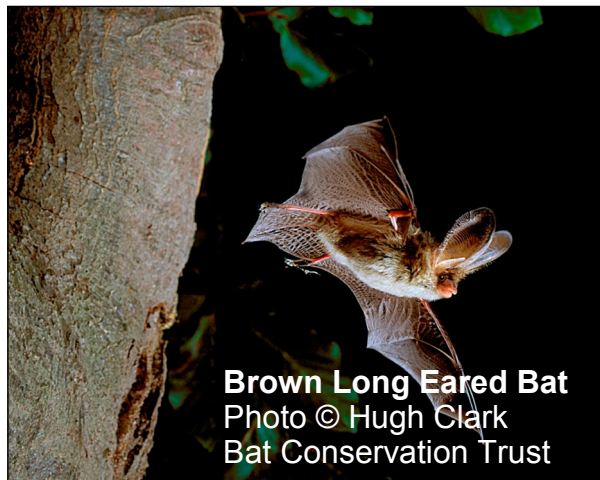


Parc Cenedlaethol Arfordir Penfro  
Pembrokeshire Coast National Park

## Understanding our Environment – Deall Ecosystemau

Deall Ecosystemau is an exciting pilot project designed to get people to take an active interest in finding out more about their local environment and in particular bats. Part of the frustration with bats is that bats fly at night when it's hard to see them and we cannot usually hear them. This means we don't always know what types of bats are about and if they are present at all! Fortunately for us, modern technology means we can eavesdrop into their world through the use of bat detectors to record their high frequency calls.

There are 17 species of bats known to be resident in the UK – 15 of these are in Wales. They are all different and each have their own ecological needs so it is important that we know what species of bat we have and where they occur.



**Brown Long Eared Bat**  
Photo © Hugh Clark  
Bat Conservation Trust

Bats are an essential part of our ecosystem and play a vitally important role in controlling nocturnal insects such as mosquitoes, midges, crane flies and moths.

The project lets members of the public borrow a bat detector pack from a loan centre and to put the detector out in a location of their choice for a few nights to automatically record the bat's echolocation calls. This could be a woodland, local park or even in their back gardens. Bat Conservation Trust will analyse the recordings and send a report back identifying what bats were recorded, and an indication of the level of activity.

This is a pilot project taking place in Anglesey & Gwynedd, and in Pembrokeshire, to test out a potential wider roll-out of the survey across Wales as part of the future of BCT's Monitoring Programme. The information gathered will be used to help us better understand the distribution of bats across Wales and to help direct future conservation strategies.

Our own monitoring programme indicates that whilst 3 species of bat are starting to increase following huge historic declines, most species of bat are at best stable and we need to understand more about where bats occur and how they fit into our ever changing environment.

We would very much like communities to get involved. This project may also be of interest to schools where bat conservation science can deliver multiple cross-curricula objectives.





People wanting to take part in the project will need to book a detector through an on-line booking system that will direct them to a loan centre from where they can pick up their detector pack. Details of these are at: [www.bats.org.uk/pages/wales.html](http://www.bats.org.uk/pages/wales.html) Bilingual instructions are included.

For more information contact Steve Lucas [slucas@bats.org.uk](mailto:slucas@bats.org.uk)  
This project is part funded by Natural Resources Wales.

**Steve Lucas**  
Bat Conservation Trust



## Pembrokeshire Wins in Young Journalism Competition

Young Reporters for the Environment Litter Less Campaign is an international journalism competition run in Wales by Keep Wales Tidy on behalf of FEE (The Foundation for Environmental Education). It empowers young people between 11-25 to take a stand on a global fight against litter and articulate these issues through writing, photography and video. We are delighted to announce two of the national winning entries in Wales for 2019 were from Pembrokeshire.

Photography 11-14 - **Phoenix Collins**, from Tenby Youth Club submitted a photograph titled "Drowning in plastic in Tenby" which raised concerns of the number of plastic inflatables sold along the sea front.



Photography 19-25 - **Harriet Sleight**, who volunteers on Skomer Island, submitted a photograph showing the plastic collected during a beach clean which is a contrast to beautiful seascape and island behind.



Sophie Howe, Future Generations Commissioner for Wales and one of the judges on the national YRE jury said;

"It has been a real pleasure to be part of the judging panel discovering some of Wales' most talented young environmental reporters and photographers.

"I have been really inspired by the brilliant entries that reflect how passionate young people are about taking action on plastic pollution and other waste. The entries explored solutions to a global problem from a local perspective, by involving the community and raising awareness of the terrible consequences litter has on our wildlife, marine life and landscape, and how we can all play a part in being a globally responsible Wales."

Lesley Jones, Chief Executive for Keep Wales Tidy said;

"We were delighted to see many aspiring young journalists around the country using their creative skills to raise awareness of waste and litter and demonstrate how everyone can help locally to deal with a global problem."

**Nia Lloyd**  
Keep Wales Tidy



# Biodiversity Events

## June—September



Date	Title	Information	Contact
04/06/19 18:00 – 19:30	Wildflower Walk Freshwater East	Join South Pembrokeshire local group for a wildflower walk with Vicky Tomlinson at Freshwater East nature reserve	Welsh Wildlife Centre: 01239 621600
08/06/19 14:00 – 16:00	Wildflower Walk Broadhaven South	Explore hidden wildflower hotspots getting to know our dazzling array of spring and summer wildflowers more intimately. Stroll with our local guide and expert as she shares stories and tips on identification as well as medicinal, culinary and household uses of our common flora. £4 per person.	01437 720392
08/06/19 10:00 – 15:00	Seabirds with Chicks Stack Rocks	Drop by and see who has made a nest on the dramatic sea cliffs around Stack Rocks. See how many eggs and chicks you can spot, and have a chat with our local ranger to find out more about the lives and habits of the residents. The cliffs are particular hotspots for guillemots and razorbills amongst others.	01437 720392
16/06/19 12:00 – 14:00	Walk at West Williamston	Join South Pembrokeshire local group for a walk at West Williamston nature reserve	Welsh Wildlife Centre: 01239 621600
23/06/19 14:00 – 16:00	Tenby Castle Hill Broadhaven South	Explore hidden wildflower hotspots getting to know our dazzling array of spring and summer wildflowers more intimately. Stroll with our local guide and expert as she shares stories and tips on identification as well as medicinal, culinary and household uses of our common flora. £4 per person.	01437 720392
17/07/19 14:00 – 16:00	Wildflower Walk Manorbier	Explore hidden wildflower hotspots getting to know our dazzling array of spring and summer wildflowers more intimately. Stroll with our local guide and expert as she shares stories and tips on identification as well as medicinal, culinary and household uses of our common flora. £4 per person.	01437 720392
24/07/19 11:00 13:00 14:00	Pond Safari Colby Woodland Garden	In collaboration with the National Trust, this is an opportunity to get close up and hands-on with the fascinating wildlife in Colby's streams and ponds. Normal admission plus £3 per child for the activity. Sessions last one hour.	01437 720392
29/07/19 20:00 – 22:00	Brilliant Bats Carew Castle	As darkness falls, find out what is emerging from the nooks and crannies. Discover more about what these elusive nocturnal creatures get up to, and tune in to their chatter on our echolocation detectors. £4 per child, £6 per adult.	01437 720392



# Biodiversity Events

## June—September



Date	Title	Information	Contact
02/08/19 20:00 – 22:00	Brilliant Bats Carew Castle	As darkness falls, find out what is emerging from the nooks and crannies. Discover more about what these elusive nocturnal creatures get up to, and tune in to their chatter on our echolocation detectors. £4 per child, £6 per adult.	01437 720392
24/07/19 11:00 13:00 14:00	Pond Safari Colby Woodland Garden	In collaboration with the National Trust, this is an opportunity to get close up and hands-on with the fascinating wildlife in Colby's streams and ponds. Normal admission plus £3 per child for the activity. Sessions last one hour.	01437 720392
22/08/19 11:00 13:00 14:00	Pond Safari Colby Woodland Garden	In collaboration with the National Trust, this is an opportunity to get close up and hands-on with the fascinating wildlife in Colby's streams and ponds. Normal admission plus £3 per child for the activity. Sessions last one hour.	01437 720392
26/08/19 20:00 – 22:00	Brilliant Bats Bishop's Palace St David's	As darkness falls, find out what is emerging from the nooks and crannies. Discover more about what these elusive nocturnal creatures get up to, and tune in to their chatter on our echolocation detectors. £4 per child, £6 per adult.	01437 720392
03/09/19 20:00 – 22:00	Brilliant Bats Carew Castle	As darkness falls, find out what is emerging from the nooks and crannies. Discover more about what these elusive nocturnal creatures get up to, and tune in to their chatter on our echolocation detectors. £4 per child, £6 per adult.	01437 720392
14/09/19 20:00 – 22:00	Brilliant Bats Bishop's Palace St David's	As darkness falls, find out what is emerging from the nooks and crannies. Discover more about what these elusive nocturnal creatures get up to, and tune in to their chatter on our echolocation detectors. £4 per child, £6 per adult.	01437 720392
14/09/19	Discover Reptiles	Join our local ranger to discover elusive reptiles and their habitats along this magnificent stretch of Coast Path. A moderately strenuous walk. £4 per child, £6 per adult.	01437 720392
15/09/19 20/09/19 27/09/19	Seal Walk	As seal pupping season begins join our local ranger as he guides you to their favourite haunts, and teaches you how to watch seals safely. Two hour session £4 per child, £6 per adult. Full day £6 per child, £8 per adult.	01437 720392

## PNP Contact Details

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Pembrokeshire Nature Partnership website:

<https://www.pembrokeshire.gov.uk/biodiversity>

Wales Biodiversity website:

[www.biodiversitywales.org.uk](http://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

bluestone  
national park resort



Bumblebee  
Conservation  
Trust



Friends  
of Pembrokeshire Coast  
National Park



Ffrindiau  
Parc Cenedlaethol  
Arfordir Penfro



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



Plantlife



Ariennir gan  
**Lywodraeth Cymru**  
Funded by  
**Welsh Government**



WEST WALES  
BIODIVERSITY INFORMATION CENTRE  
CANOLFAN WYBODAETH BIOAMRYWIAETH  
GORLLEWIN CYMRU



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