



This edition of the newsletter has a focus on the historic environment record of peatlands,

showcasing some recent projects and studies in the UK, with a diversion across the Channel to the Netherlands. 'Historic environment is an umbrella term for archaeological, palaeoecological, geographical and historical methodologies. These five short summaries illustrate the important and inspiring range of such work that is currently being carried out on peatlands. Whilst the central theme for peatland archaeological studies remains the exceptional preservation potential of these environments, the importance of cross-sectoral collaboration, public engagment and threats to the survival of the archaeological record are associated issues. Read full introduction...

With thanks to Dr Ben Gearey, Department of Archaeology, UCC, Cork, Ireland and all those who kindly contributed content.

We are all aware of the benefits of well managed healthy peatlands; rich biodiversity, good water quality and carbon storage. It is perhaps less obvious that these peatlands are also highly important as a repository and source of information on our historic environment. The waterlogged, acidic and anaerobic conditions of peatlands acts to preserve both organic and some inorganic archaeological remains in a way that no other environment does. These conditions allow us to uncover artefacts and features that we cannot find on traditional "dry land" archaeological sites.

Some of the most iconic archaeological discoveries of the 19th and 20th centuries come from peatland, some of which are highlighted below. In addition to traditional archaeological finds, peatlands hold a record of past environment, in the form of pollen, plant and animal remains. These "ecofacts" have the potential to shed light on the climate, environment and vegetation in the area around the peatland site from which they are came. This information can provide us a valuable picture of the past in one locale over the course of hundreds or even thousands of years.

While these discoveries have provided important information on our past, it should be highlighted that it is due to the destruction or denudation of peatland that we make these discoveries. This illustrates the issue of identifying historic environment assets in peatland. Simply put, it is very difficult and few of our traditional methods of archaeological survey and prospecting can be successfully used in a peatland environment. Both Ground Penetrating Radar and LIDAR (light detection and ranging) technologies can be used to limited extent to look at past land surfaces or present peat surface features but neither have the ability to identify features within or beneath peat. This gap in our ability to detect the historic environment within peatland presents a challenge as we move forward and continue the excellent

peatland restoration work across the country. How do we ensure that this element of our peatlands is protected whilst we continue to improve the quality of the peatland overall. There is no clear answer, but it is food for thought.

Rory McDonald, Historic Environment Scotland

Dry peatlands lose hidden treasures.

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The abundance of organic archaeological artefacts and paleoenvironmental evidence found in waterlogged environments exists largely because the subsequent lack of oxygen severely slows deterioration. For peatlands themselves, the negative consequences of losing this waterlogging through drainage and land use change are well documented. But what happens to the unique historic archive when these changes occur? Increasingly, case studies from across the UK are illustrating just how damaging changes in the environment can be to buried archaeological remains. <u>Continue reading...</u>

New insights into late prehistoric life revealed at Glastonbury

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New excavations in the Somerset Levels demonstrate continued preservation and survival of internationally important archaeological sites in lowland wetlands.

The Somerset Levels contain the highest concentration of peatland archaeological sites in the UK, with monuments from the Neolithic period (c. 5800 years before present) onwards. New archaeological and palaeoecological investigations at Glastonbury Lake village, an iconic prehistoric site and wetland settlement, continues to produce remarkable evidence of Iron Age life. <u>Continue reading...</u>



One of the most complete records of the interaction between our environment, human activity and climate change is provided by palaeo-environmental examination of the peatlands of South West Britain.



Image above: UAV Survey commissioned in advance of mires restoration on Exmoor, this high-resolution survey was carried out using an unmanned aerial vehicle. It shows a Bronze-Age barrow (*lower centre*), turf-cutting pits (*right and top left*) and post-medieval cultivation (*bottom left*). The latter was a previously unrecognised example of a very rare activity – the area was within a royal forest at the time where agriculture was highly restricted.

The value and importance of embedding a Historic Environment officer within peatland restoration and conservation programmes such as the Exmoor Mires Projects is highlighted by the significant numbers of new sites and monuments identified on Exmoor and their potential for public engagement. <u>Read full</u> <u>article here...</u>

Dartmoor's peatlands preserve nationally and internationally important archaeological heritage

A range of recent excavation and assessment projects have demonstrated the significance of upland wetlands in Dartmoor's past, for both extractive industry in the recent past and for social or spiritual activities in prehistory.

Antiquarian sources reported the recovery of stone tools from below and within Dartmoor's peat, but recent work as part of both peatland restoration schemes, and chance finds, have demonstrated preservation of internationally important archaeological sites and landscapes within the peat across the moor including burial



goods of the oldest turned wood yet recovered in Britain, a unique composite textile object, woven basketry, a tin-studded bracelet, and all wrapped in the pelt of a bear. <u>Read full article...</u>



Home turf... further afield



Home Turf: An integrated approach to the long-term development, cultural connections and heritage management of Dutch raised bogs is a project currently underway at Wageningen University & Research (2017-2022), funded by the Dutch Organisation for Scientific Research. The project team is analysing the long-term development of raised bogs in the north-eastern, eastern and southern parts of the Netherlands and adjacent parts of Belgium and Germany, with a main focus on human-land interactions.

The large majority of Dutch bogs (over 90 %) has already disappeared due to peat-cutting and reclamation, and the remainder is under threat from climate change, agriculture, desiccation and pollution. The project aims to design proactive strategies for the sustainable management of bog-related cultural remains including prehistoric archaeological sites and tangible and intangible remains related to bog reclamation history (e.g. old parcellation systems and former reclamation farm sites).

The interdisciplinary study aims to link data from the humanities and environmental sciences by integrating physical geographical, archaeological and historical geographical data at various spatial scales. Detailed insights into the diverse trajectories that bog landscapes followed through time and how these patterns relate to human activity are being discovered. With the aid of constructive dialogues between scientists, numerous authorities, land management agencies and private owners the project aims to construct mechanisms to integrate the interests of all of these stakeholders.

For more information: see www.boglandscapes.eu or contact Dr. Roy van Beek (roy.vanbeek@wur.nl)

Our news

Peatland Code Highly Commended in Nature of Scotland Awards 2018

The <u>Peatland code</u> was Highly Commended as an innovative funding mechanism for peatland restoration in the 2018 <u>Nature of Scotland</u> Innovation Award category. The Nature of Scotland Awards celebrate and recognise the best of conservation in Scotland.

If you would like more information about the Peatland Code, please contact Jillian Hoy, IUCN UK Peatland Programme, Peatland Code Coordinator, Jillian.Hoy@iucn.org.uk.



New film "The Carbon Farmer" paints a bright future for UK peatland conservation, agriculture and climate action

In their current state the UK's peatlands are a source of around 20 million tonnes of CO2 (equivalent) per year – this is the same as the yearly emissions from electricity use in two and a half million homes. A new short film premiers possibilities for achieving a brighter carbon future.



The Carbon Farmer - a sci-fi mocumentary, set roughly 100 years from present day - follows the story of a man whose family have been working the same upland farm, based on peat soils, for generations and have radically evolved in the face of climate change. In a world where tax payer's money is used to subsidise work to maintain the health of peatlands for numerous public benefits, he and his granddaughter show what could be possible in future – what we could gain, and what we could manage not to lose.

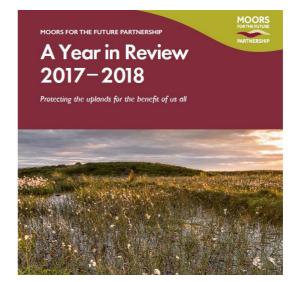
A collaboration of organisations, including: IUCN Peatland Programme; The Wildlife Trusts; the National Trust for Scotland; The National Trust; Moors For The Future Partnership and Beadamoss® Micropropagation Services, supported independent Filmmaker and Ecologist Andy Clark to present a best-practice concept to share through this film. <u>Continue reading...</u>

Partner highlights

Moors for the Future Partnership 2017/2018 annual report published

Moors for the Future Partnership's <u>annual report</u> <u>for year ending April 2018</u> is now available to read online, packed with stories that give a flavour of the work completed by the partnership in the last financial year – including its 15th anniversary celebrations. If you would like a paper copy of the Partnership's annual report, please contact

Charlotte.Kenyon@peakdistrict.gov.uk.





Carbon connects

Yorkshire know-how will soon be helping to restore blanket bog around England. The Our Common Cause (OCC) project has contracted Yorkshire Peat Partnership to provide restoration expertise on upland commons from Cumbria all the way down to Devon.

Rosie Snowden, our lead on the contract bid, said: "This is exciting work - it's a great opportunity for the peatland community, including landowners and farmers, to learn from one another and share experience of peatland restoration. I'm really looking forward to working with partners around England and seeing how they manage their blanket bog.

Our Common Cause is led by the Foundation for Common Land and funded by Heritage Lottery Fund. <u>More</u>



<u>Carbon Connects</u> is a €4.5 million project funded by Interreg (North West Europe) which aims to reduce the carbon emissions and enhance carbon sequestration of mismanaged peatlands in North Western Europe. Carbon Connects is made up of 16 project partners from government, business, research and landowners groups spread across the Netherlands, France, Belgium, Germany, Ireland and the United Kingdom. The North Pennines AONB Partnership on behalf of Durham County Council, supported by the Wear Rivers Trust are partners in the Carbon Connects project. Carbon Connects in the North Pennines aims to deliver the following objectives:

- Restoring 10 ha of blanket bog currently with 'the wrong vegetation' and in a downward ecological trajectory. These degraded sites are losing their sphagnum layer and are becoming drier risking further sphagnum loss, accelerating the cycle of deterioration and potentially leading to the elimination of all sphagnum cover.
- Facilitating the development of Countryside Stewardship Agreements with landowners in the North Pennines AONB to ensure they include the restoration plans and capital funds for peatland restoration across the AONB.
- Increasing the capacity of the nursery industry that supplies specialised plant species for peatland restoration in Northern England.

For further information on Carbon Connects contact: Lee@northpenninesaonb.org.uk

Vacancies - research opportunities and jobs

Welsh Peatlands Project Officer

Closing Date: 3 January 2019 10.00 a.m.Salary: up to £26,470Location: National Park Office, Penrhyndeudraeth, Gwynedd

The Welsh Peatlands Project is funded by the 'Welsh Peatlands Sustainable Management Scheme'. It's a temporary full time post until 31st of December 2020. The ability to communicate in both Welsh and English is essential. <u>Details</u>

Invitation to Tender - Curlew Monitoring Officer

Deadline for Application: Friday 21st Dec. 2018 **Location:** the south west of Lough Neagh <u>Details</u>

Managing peatland natural caiptal in the Falklands (PhD in Environmental Geography)

Lead supervisor: Dr Richard Payne, Department of Environment and Geography, University of York Co-supervisors: Prof. Chris Evans (Centre for Ecology and Hydrology), Dr Ilaria Marengo (South Atlantic Environmental Research Institute), Dr Dmitri Mauquoy (University of Aberdeen).

Details

Evaluating the impact of woodland management and drinking water abstraction on groundwaterfed wetlands

The Loddon Observatory (University of Reading), South East Water and the British Geological Survey are offering a fully funded PhD as part of the NERC SCENARIO doctoral training programme to investigate and model the impact of habitat management and groundwater abstraction on the hydrology of the fen.

Details

Events

If you would like to share upcoming events please email info@iucn.org.uk.

New resources

Copernicus

Yorkshire Peat Partnership has contibuted to a European Space Agency publication on the use of the Copernicus satellites. The partnership decsribes how it <u>uses satellites to monitor change in peatland</u> <u>vegetation</u> - you can find the article on p.160.

News from around the world...

United Nations Framework Convention on Climate Change (UNFCCC), Conference of the Parties, twenty-fourth session (COP24):

Professor Mark Reed, IUCN UK Peatland Programme & Newcastle University, shared experience in developing blended finance mechanisms for funding restoration after wildfire, including some of the latest evidence emerging from the analysis of the recent wildfire commonly reported as Saddleworth Moor.



Recovering from wildfire using place-based ecosystem service payments



In other news...

- Heathrow takes vital step towards carbon neutrality Ethical Marketing News, 31st October
- YP Letters: Simulated grouse shooting is far less damaging Yorkshire Post, 3rd November
- <u>MPs call for 'watchdog with teeth' to oversee environmental standards post-Brexit</u> edie.NET, 6th
 November
- <u>War and peat: how bog moss helped save thousands of lives in World War I</u> Yahoo News, 9th November
- <u>Who goes there? Mapping 'Extreem Wildernes'</u> Walk Highlands, 12th November
- <u>Conservation areas help birdlife adapt to climate change</u> Alpha Galileo, 12th November
- <u>Brexit and climate change threaten our environment we need urgent green laws</u> Third Force News, 13th November
- <u>Scottish environment charities launch urgent bid for an Environment Act for Scotland</u> The Great Outdoors, 13th November

- <u>Climate change: Worries over CO2 emissions from intensifying wildfires</u> BBC News online, 15th November
- <u>RSPO certification standards undergo major review: Top expert takeaways from the 'most</u>
 <u>consultative review process ever'</u> Food Navigator Asia, 16th November
- Investing in the natural world pays dividends Scotsman, 20th November
- <u>The carbon cycle of peatlands may change under global climate change</u> AlphaGalileo, 21st November
- Wildlife Column: The Black Darter of the peat bog... Sheffield Telegraph, 26th November
- Flood threat may result in people being moved to new areas Guardian, 26th November
- End of an era as Ireland closes its peat bogs 'to fight climate change Guardian, 27th November
- <u>Scientists call for eight steps to increase soil carbon for climate action and food security</u> Science Codex, 3rd December
- Wetlands CAP proposal may hurt farmers EnviroSolutions, 3rd December
- <u>The most important country for the global climate no one is talking about</u> MSN NEws, 5th December
- <u>Natural solutions for climate change a better bet than sci-fi schemes says Christian Aid report</u> Independent Catholic News, 7th December
- Finding the positives in a poor grouse season Scottish Field, 10th December
- <u>Damaged peatlands contribute to carbon emissions</u> Ecologist, 11th December
- <u>Mountain dues: why we should give thanks for the giants in our midst</u> Press and Journal, 11th December
- <u>Getting through the bog of water deterioration together</u> Water and Waste Water Treatment, 12th December
- Manchester moor fires made 'significant' contribution to toxic air quality, report says Air Quality News, 17th December

*This list is by no means comprehensive, nor are these stories endorsements from the Programme, but for your information only.

Merry Christmas and a wonderful New Year from the IUCN UK Peatland Programme team.

The next edition of our newsletter will be with you on 20th February 2019 .

Privacy policy:

We have recently updated our Privacy Policy, in line with recent changes to data protection. Within the policy, we outline why we capture your personal data, what we use it for, and how we keep it safe, to keep you informed and in control. For further information, please visit our website: <u>www.iucn-uk-peatlandprogramme.org/privacy</u> or telephone us on: 01904 659570.

Further information:

Header image: Bidean nam Bian, Glencoe © Sarah Proctor

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To submit items please email Lyndon: <u>lyndon.marquis@iucn.org.uk</u>

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