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Report of Sphagnum reintroduction workshops delivered through Pennine PeatLIFE

Pennine PeatLIFE delivery partners



Pennine PeatLIFE is funded by



Day 1: 09.11.2022

Location: North Pennines AONB Partnership Office, Stanhope, County Durham

Day 2: 21.05.2020

Location: Online webinar and discussion

1. Objectives – Workshop 1

- Demonstrate the scale of peatland restoration work in the project area through visit to site currently under restoration
- Emphasise the importance of Sphagnum reintroduction and establishment in bare peat restoration
- Discuss cost-effectiveness of methods available in the project area
- Summarise findings to date of trial of different methods



2. Objectives – Workshop 2

- Discuss key species to use in peatland restoration projects in the project area, and more widely in the UK

3. Overview

The first workshop to take place was for the Environment Agency, discussing the key role of Sphagnum introduction in peatland restoration in the Pennine PeatLIFE project area. Staff from the Environment Agency in a wide range of advisory, administrative and policy roles attended the event at Valance Lodge in Teesdale (North Pennines AONB).

There was great discussion about the different methods being trialled in the project area, the cost effectiveness of these methods and challenges arising when using each of the methods. The methods being trialled and discussed were:

- Hand harvested clumps
- Sphagnum-rich brash
- Commercially grown hummock plugs
- Commercially grow plug plants
- Gel containing Sphagnum spores
- Clay beads containing Sphagnum spores



Sphagnum planting at Valance Lodge (North Pennines AONB)

The second workshop complete as part of the Pennine PeatLIFE project was a follow up session based on a Sphagnum webinar delivered through the project where confusion arose around the Sphagnum experts' responses to questions around species used in peatland restoration projects.

Richard Lindsey chaired the meeting and started it by saying he had had a long chat with John O'Reilly regarding his webinar and John O'Reilly's answers to some of the questions regarding Sphagnum and restoration.

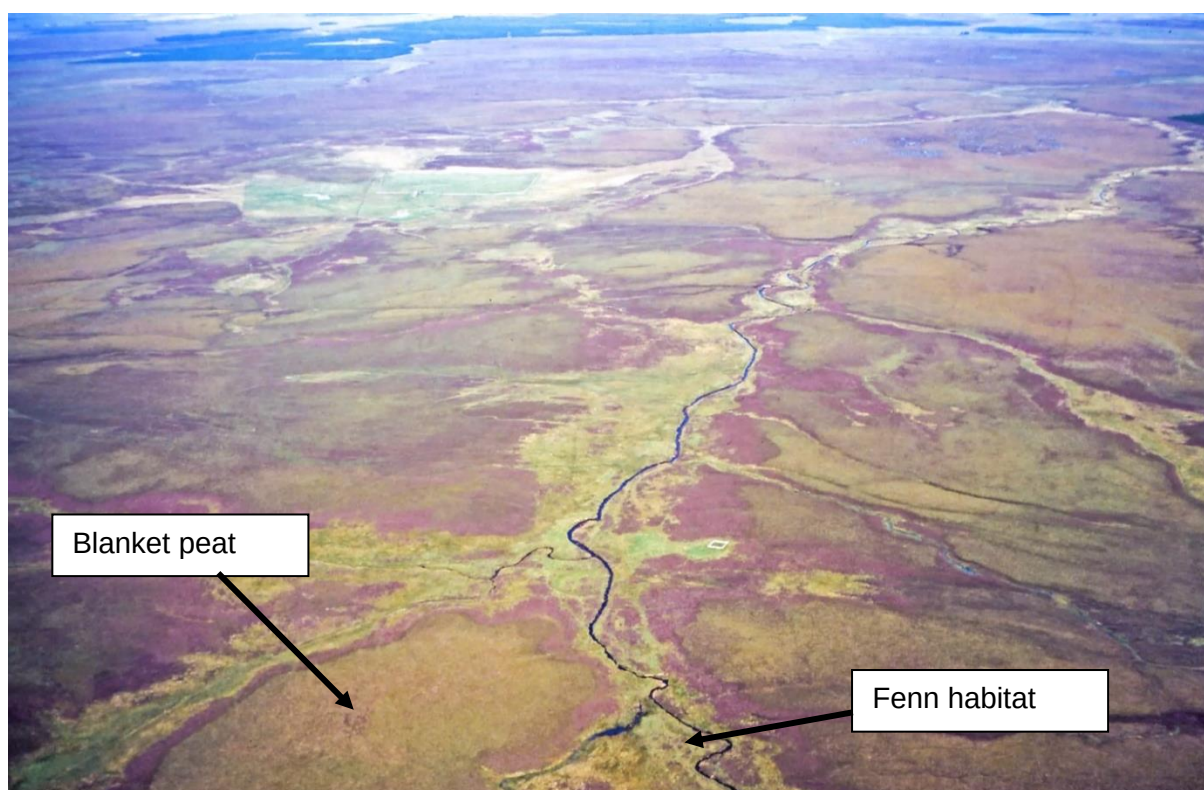
In the questions and answer session of the webinar John O'Reilly said that he didn't see any evidence to suggest that introducing non-peat forming species (*S. fallax*) into a restoration area and in fact it might be not advisable as it may outcompete peat forming species.

Richard Lindsey argued that he didn't think this was necessarily true and the overall message of the meeting was that any species of *Sphagnum* is better than none as *Sphagnum* provides a secondary water table and climatic condition for other plants/mosses which require a stable water table. So in effect on a restoration site there would be the true water table, below the surface, and a second water table at the surface that is created by the brash/*Sphagnum* layer.

There was then a discussion around *Sphagnum* paludiculture trials, where even during long dry spells the *Sphagnum* does not actually encounter true drought conditions. Partly due to air moisture. In hot conditions a layer of *Sphagnum* can actually lower the true water table as it increases evaporation.

Sphagnum species like *subnitens* and *palustre* are fenn species. *Papillosum*, *magellanicum* and *capillifolium* are true bog species in the UK.

There was then a discussion about how blanket bog is made up of blanket bog, fenn habitat and mire habitat, and different species that can be found in areas of the peatland.



The general consensus was that mixed plugs are better than single species plugs as restoration sites vary so much; it would be near impossible to plan where to plant each individual species of Sphagnum. At least with mixed plugs something is likely to take. And we don't need to be precious about where we plant Sphagnum. Hydrological interventions on a bare peat sites create artificial fenn habitats. This led to a discussion from YPP about potentially using a 'gully bottom' mix to rapidly colonise gully bottoms.

4. Outcomes

These events shared knowledge and guidance on working on peatland restoration projects and how to incorporate methods of Sphagnum establishment within these projects, from initial planning, to post restoration monitoring. Both workshops were funded by the Pennine PeatLIFE project. The two workshops were also valuable opportunities to exchange knowledge with other peatland restoration practitioners and identify common problems and potential solutions in the planning stages of restoration projects, which can be used to inform restoration decisions and improve the results of future work. The event was also an effective networking exercise from which valuable connections were made which have led to useful knowledge sharing and collaborations on future events and projects.

Appendix 1.

Attendees

26/03/2018 – Environment Agency day

Name	Organisation
Alistair Lockett	North Pennines AONB Partnership
Leila Huntington	Environment Agency
Jenny McCarthy	
Andrea Emsley	
Joe Toman	
Jim Heslop	
Tristan Drought	
Tara Duncan	
Alex Haley	
Roz Watson	
Phil Marshall	
James Carradice	
Mark Manley	
Kate Robinson	
Kane Davison	
Jack Hugill	
Phil Taylor	
Anna Caygill	
Richard Robinson	
Kirsty Hardy	
Mark Paterson	
Emma Klonowski	
Chris Hood	
Catherine Marshall	
Louise Blair	
Sam Bainbridge	
Dan Moss	
Tom Gore	
Celia Jonquet-Burns	
Jonathan Kellagher	
Kevin Cunningham	
Joe Allan	
Taryn Al-Mashgari	
Simon Wilson	
Kevin Rich	

21/05/2020 – Sphagnum webinar and discussion

Name	Organisation
Richard Lindsey	University of East London
Neil and Barbara	Micropropagation
Katy Thorpe	Moors for the Future
Chris Miller	Yorkshire Peat Partnership
Jenny Sharman	
Rosie Snowdon	
Beth Thomas	

Tim Thom	
Matt Snelling	
Dom Hinchley	
Gareth Rober	RSPB
Alistair Lockett	North Pennines AONB Partnership
Kate Cartmell Done	North Pennines AONB Partnership