

Moors for the Future Partnership



**Applying new technologies &
Citizen Science to Protected Areas**



Peak District and South Pennine Moorlands

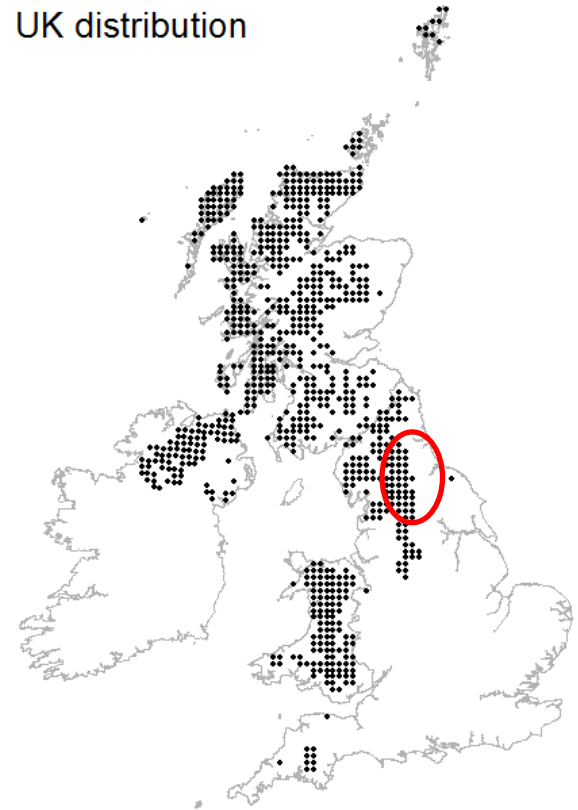
- Peak District National Park is within 1 hour's drive for 20 million people.
- Probably most visited moorlands worldwide with access across wide areas.
- 1951, first UK National Park.



Moorland habitat: Blanket Bog

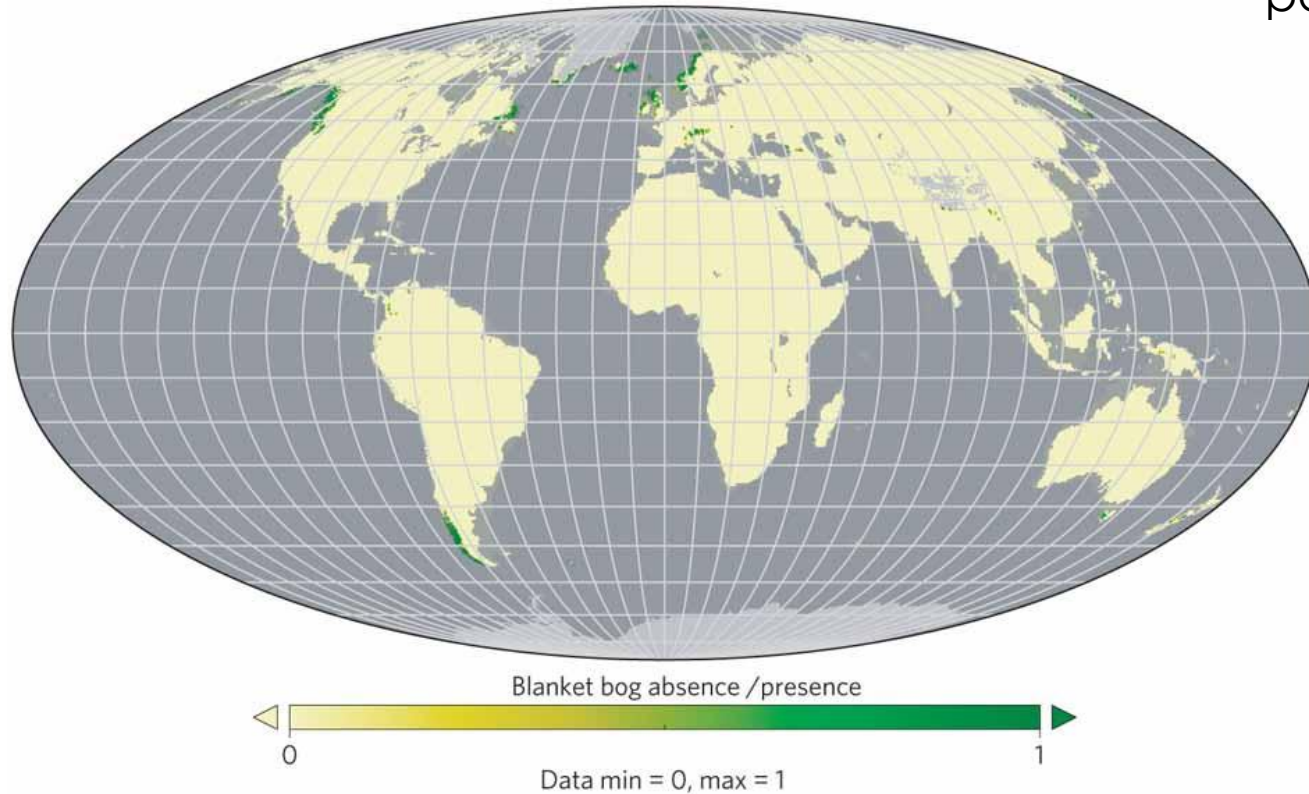
- Water and mineral source comes from rainwater, mist & cloud-cover.
- Nutrient-poor and acidic, dominated by acid-loving plants, especially *Sphagnum*.
- 10–15 % global resource in UK.
- South Pennines represents most south-easterly

UK distribution



Blanket Bog

The UK is one of 20 countries that between them contain 92% of the world's peat soils.

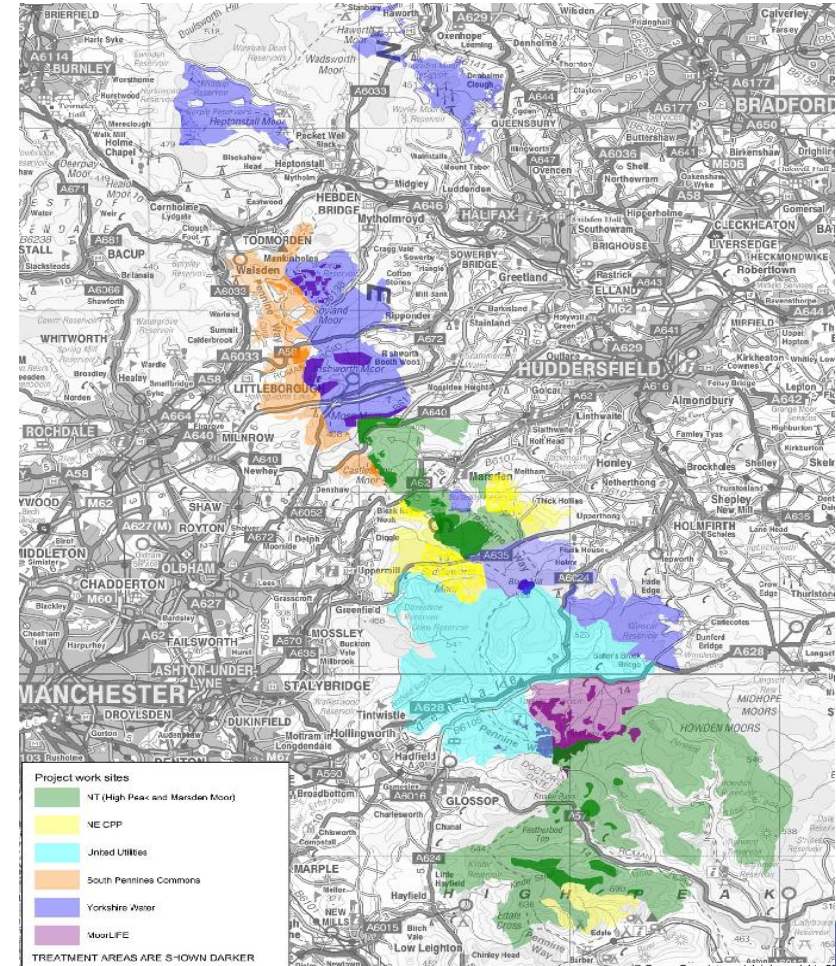


Restoration sites - Southern Pennines

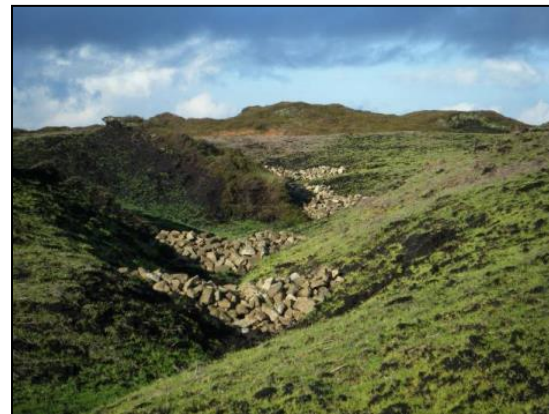
- The Southern Pennines is the most degraded upland peat in the world.
- Atmospheric pollution and wildfires have created bare, eroding peat and led to an environmental catastrophe.

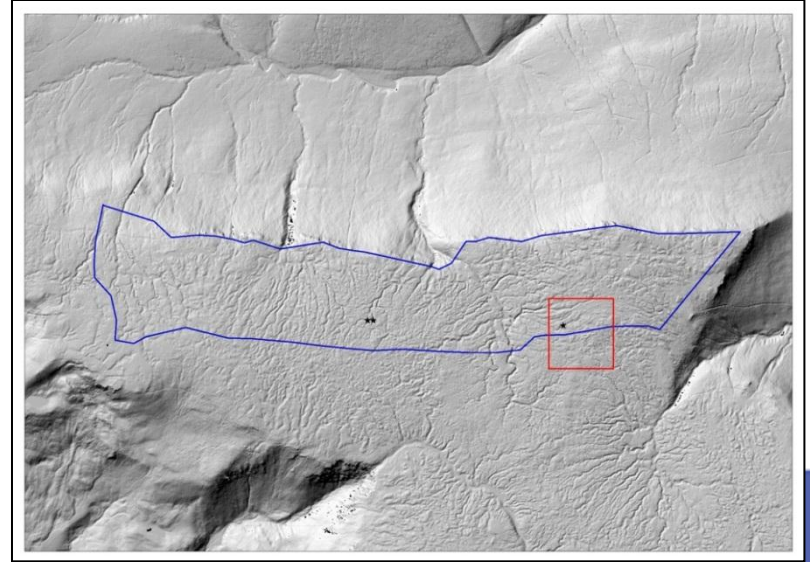
BIG problem
needs
a
BIG solution

- Moors for the Future Partnership are delivering over 20 innovative projects.



Conservation works







**PEAK
DISTRICT
NATIONAL
PARK**



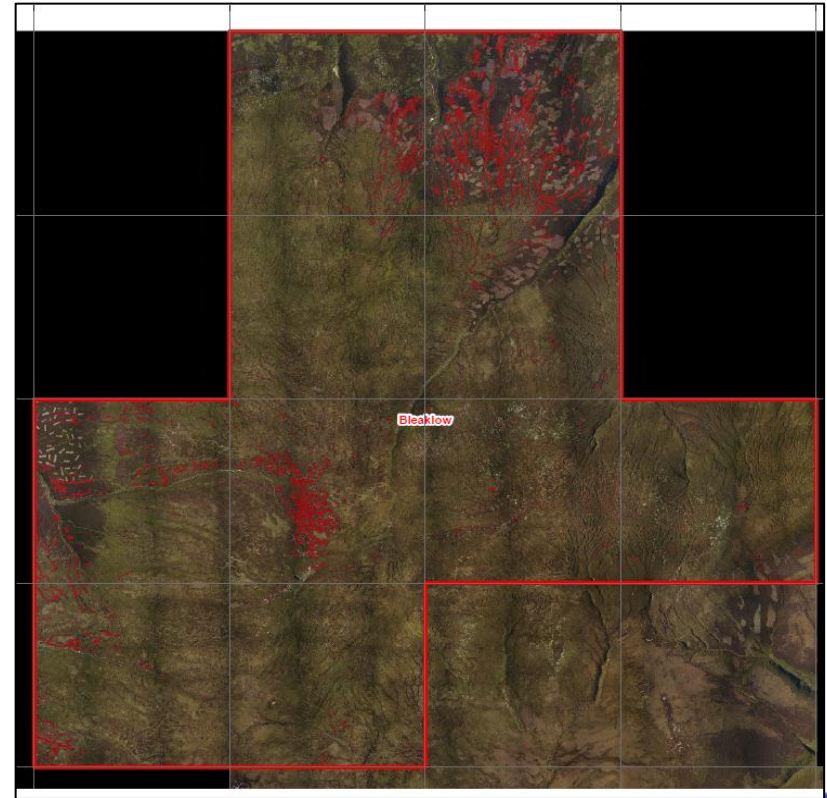
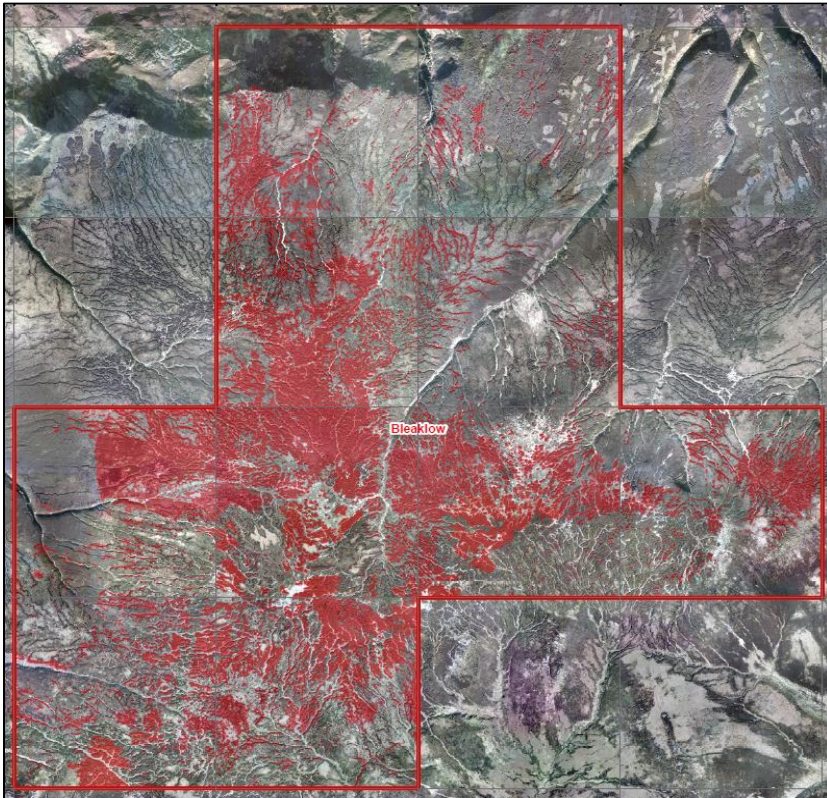
Conservation Works.



Black Hill 2011

Evidence – it works

Reducing bare peat (red) on Bleaklow plateau from 200ha (2004) to 13ha (2014).



New communications...

Citizen Science



Authority's mission statement

**By inspiring millions of people together we will
protect and care for our national park,
for the enjoyment of all.**

Citizen Science

“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it is the only thing that ever has.”

Margaret Mead, quoted in John M. Richardson (ed.), *Making it Happen* (1982).



Community Science Project (CSP)

The CSP aims to:

- Inspire people to record data over a long period of time
- Understand how moorlands and the species they support are responding to climate change.

Data collected will help to:

- Monitor changes in the physical environment
- Monitor moorland species' responses to climate change
- Inform future conservation land management.



MoorCitizens - Opportunities to get involved

1. Casual recording

- For all moorland visitors; I spy and then iRecord.
- Opportunistic species surveys: birds & butterflies...



2. Targeted monitoring

- For regular moorland visitors.
- Repeat species surveys: bumble bees...



3. Environmental monitoring

- For those who can commit more time.
- Monthly monitoring of physical variables, e.g. water tables.



MoorCitizens – out and about



Community Science
Bird Survey

Help us to understand how birds are being affected by climate change. Take this postcard out on your visit to the Peak District and tell us if, when and where you saw them.

Did you see this bird? If so, how many did you see? If none, write 0.	What date?	Where were you? Provide as much detail as possible e.g. postcode, place name or grid reference.
Swallow Seen in summer months, nesting in buildings, flying low over fields collecting insects and sitting on telegraph wires. Why we're interested: as temperatures increase they may be arriving in the UK earlier in the spring and leaving later in the autumn. Look out for: a small bird with a dark back, and flour and pale belly. They have a long forked tail, unlike similar species.		
Red Grouse Seen in the moors of year round, often flying out of heather when disturbed. Why we're interested: prefers cooler, calmer temperatures, so as the climate warms, conditions in the Peak District may become unsuitable. Look out for: a plump, dark brown medium-sized bird with short legs and tail and a hook-tipped tail. Has a booming call.		
Cuckoo Use the moors as breeding grounds in the summer. Why we're interested: another upland bird which is predicted to decline in the Peak District if soils dry out, leading to declines in the invertebrates which they rely on for food. Look out for: a large, light-brown bird with long legs and a long downturned tail. Has a bubbling 'cuckoo' call.		

Thank you for taking part in the survey. Your results are important for understanding how moorland species are responding to climate change. Please put this card in the post, drop it off at a National Park Visitor Centre or submit your records at www.moorsforthefuture.org.uk/community-science. If you would like to receive information about the Community Science Project, please provide an e-mail address in the box below.

LOTTERY FUNDED



Community Science
Butterfly Survey

Changing climatic conditions may be affecting the distribution and emergence times of these butterflies. Help us to learn more about this by taking this postcard out on your visit to the Peak District and telling us if, when and where you saw them.

Did you see this butterfly? If so, how many did you see? If none, write 0.	What date?	Where were you? Provide as much detail as possible e.g. postcode, place name or grid reference.
Green Hairstreak When to look: usually grassland, woodland, heaths, moor, fells. What to look for: a small butterfly which holds its wings closed at rest showing their metallic green underside. In flight the brown upper sides are seen. The only UK species with green colouring.		
Orange Tip When to look: April - July. What to look for: a medium-sized white butterfly. Males have bright orange wing tips. Females can be easily confused with other white butterflies so please only record males.		
Pearce's When to look: widespread throughout the countryside. When to look: usually April - October but they can emerge from hibernation as early as January. What to look for: large, colorful butterfly with distinctive eyespots which deter predators. The undersides of the wings are almost black.		

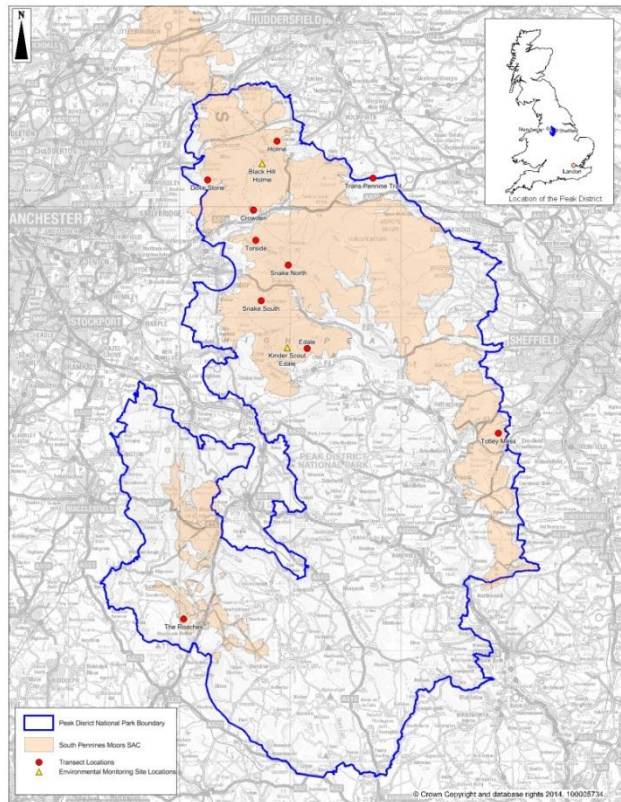
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LOTTERY FUNDED



Illustrations © Mike Langman & Chris Shield, FSC

MoorCitizens – targeted surveys



Bilberry bumblebee

A cold-loving species of uplands which is expected to decline in the Peak District in response to climate change.

- Queens (16 mm long), males (14 mm) and workers (12 mm) all have the same colouring
- Over half of the base of the abdomen is red and there are two lemon yellow bands on the thorax
- Worker shown in illustration



Tree bumblebee

First seen in the UK in 2000, it is rapidly expanding its distribution northwards. Expected to increase in abundance and distribution in the Peak District.

- Queens (18 mm long), males (16 mm) and workers (14 mm) all have the same colouring
- Black head, thorax tawny to dark brown and white tip to black abdomen
- Worker shown in illustration



Red-tailed bumblebee

A widespread and common species also expanding northwards. Less common in the uplands but this may alter with climate change.

- Queens (20-22 mm long) and workers (11-16 mm long) all black with an orange-red tail
- Males (14-16 mm long) also have yellow facial hairs and yellow bands on the thorax
- Worker shown in illustration

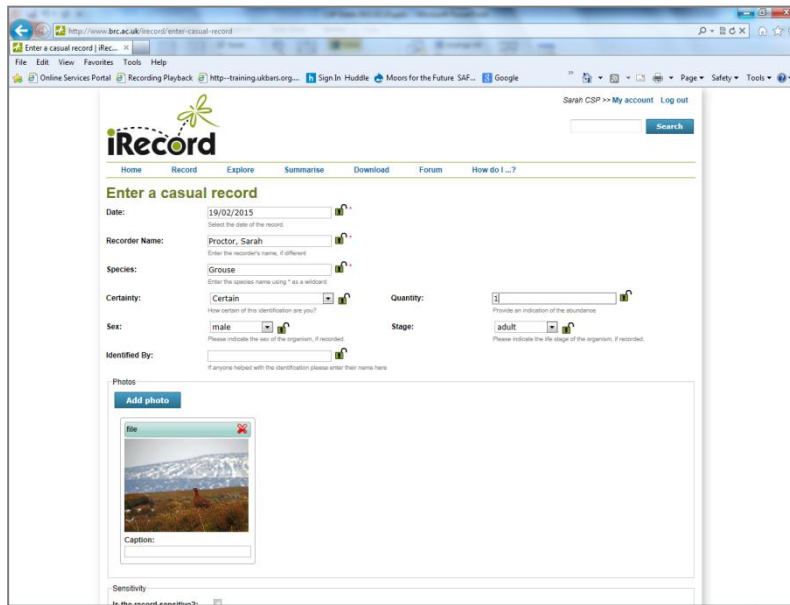


Thank you for your involvement in the Moors for the Future Partnership's Community Science Project, an important initiative to collect long-term data to help us understand how moorlands and the species they support are responding to climate change. For information about other surveys you can get involved in visit www.moorsforthefuture.org.uk/community-science



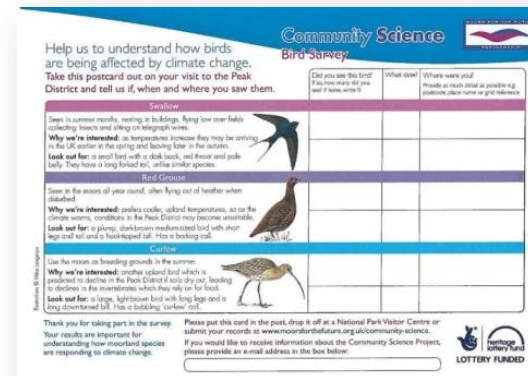
Moors for the Future Partnership's Community Science Project is funded by the Heritage Lottery Fund, Environment Agency, Natural England, National Trust, United Utilities, Severn Trent Water and Yorkshire Water. All images © Chris Shields 2013.

MoorCitizens – data recording



iRecord (www.brc.ac.uk/irecord)

- Records passed on to Biological Records Centre.
- Records verified by volunteers.

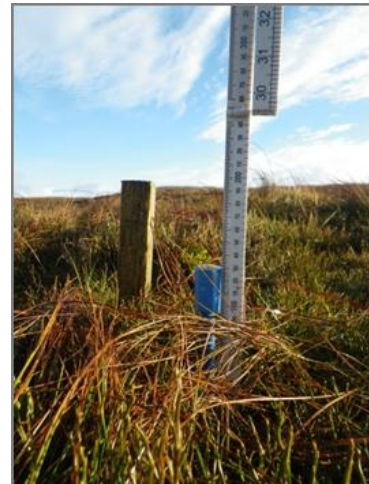
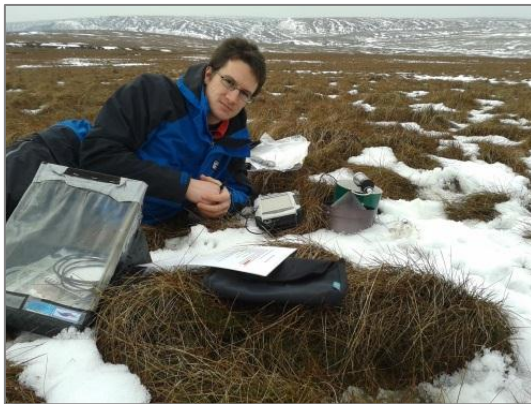


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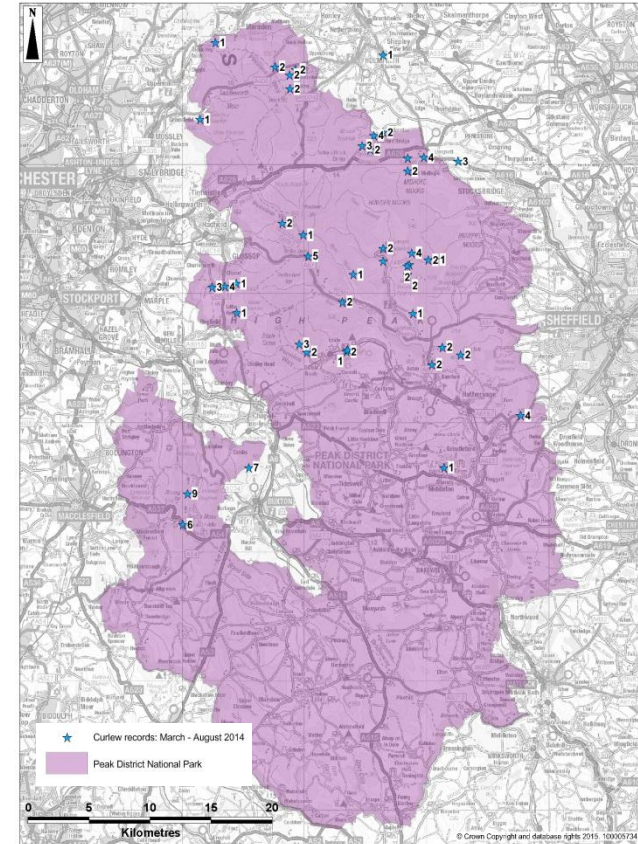
Freepost RTHR-SLGZ-HJEY
Community Science Project
Moors for the Future Partnership
The Moorland Centre
Edale
Derbyshire
S33 7ZA



MoorCitizens – environmental monitoring



MoorCitizens – recording changes over time



MoorCitizens – volunteer comments

“I have not volunteered before at all. I just hadn’t even thought this kind of ***opportunity existed.***” Yvonne & Frank

“I feel ***confident*** now that I can go out and ***do the transect myself*** and identify bees.” Vicky

“I feel like I want to give something back...I owe the environment a survey or two... ***It put a smile on my face that no amount of money could.***” Swati



**PEAK
DISTRICT
NATIONAL
PARK**



Thank You



Facebook.com/MoorCitizens

Twitter.com/MoorCitizens

Instagram: MoorCitizens



www.moorsforthefuture.org.uk

