

Exploring UK locations (Zoom In, Zoom Out)

Peat-lands, wetlands and the carbon cycle

De-Graft: This is the Red Moss of Balerno reserve where I'm exploring what are known as wetlands. Locals and tourists come here for walks and take in the scenery, and the birds love it too... Ooh I've spotted some!

Wetlands such as swamps, marshes, or bogs, are areas where the ground is saturated, or full of water, and doesn't drain properly. Bogs mainly consist of a plant called moss. Later locals Aarya and William are going to be getting a close up look at the moss here with me. But first, let's zoom out.

The Red Moss of Balerno reserve is in the Lothians in Scotland, just south of the country's capital city, Edinburgh. 60% of the UK's bogs or peatland is in Scotland, a lot of which is in the very north, or the Highlands, of Scotland.

The Red Moss of Balerno is one of only twenty raised peat bogs still surviving in this part of Scotland called the Lothians. The ground is wet and uneven so peatland reserves have created boardwalks like this to provide access.

Bogs form in cool places with plenty of rain. Moss is able to grow in low mineral conditions, it doesn't rot away but builds up to form deep layers which is called peat. Bogs like this one have been growing for thousands of years, with the layers of peat growing just millimetres per year to now make up a bog that's several metres deep.

Peat-lands are important habitats and home to a lot of wildlife including rare species of water birds and incredible little insects such as jewel beetles, dragonflies and heath butterflies.

Peat-land is really important for our planet: It helps prevent flooding by absorbing water from rainfall. It's a great source of drinking water and it locks in carbon and keeps it from damaging the environment.

Aarya and William are with me at the reserve helping to investigate a bit more. We're using magnifying glasses to zoom in and look at the moss. We've got some red moss. So guys, despite the wet weather, I still think this place looks incredible, what do you two make of it?

Child: I think it's just magnificent.

Child: All the nature looks really pretty.

De-Graft: Yeah, absolutely and it feels really peaceful out here. Now we've been using our magnifying glasses to see what we can spot out here. What kind of things have you guys found?

Child: Really pretty pink flowers and they were all around the place.

Child: Saw a lot of mushrooms, saw one big one!

De-Graft: Yeah, I spotted that too!

Now sadly in the past, and in some places today, peat-lands are destroyed and burned to make room for housing and trees. But when this happens a greenhouse gas called carbon dioxide is released into the atmosphere. That carbon dioxide has been locked away in the moss for thousands of years, but when it's released it can be very harmful to the environment.

Alright, big question for you guys, have you got any ideas about how we can protect peat-land areas like this?

Child: Maybe not walking on the plants. You could look around and not destroying it and keeping it clean.

Child: Raise awareness and put banners or posters around to keep the peat-lands safe.

De-Graft: Yeah, that's great!

OK, time to compare... One of the best examples of peat-land in the UK is an area of blanket bog called The Flow Country in the very north of Scotland. It's 4000 kilometres squared. If you put the UK capital cities - London, Edinburgh, Cardiff, and Belfast - all together, they would cover an area only half the size of the Flow Country!

So we've found some really interesting types of moss here but moss doesn't just grow in nature reserves and bogs, it can be found all over the UK. So why not try to find some near where you live. Zoom in and have a look for yourself.

Come on then, let's go explore some more!