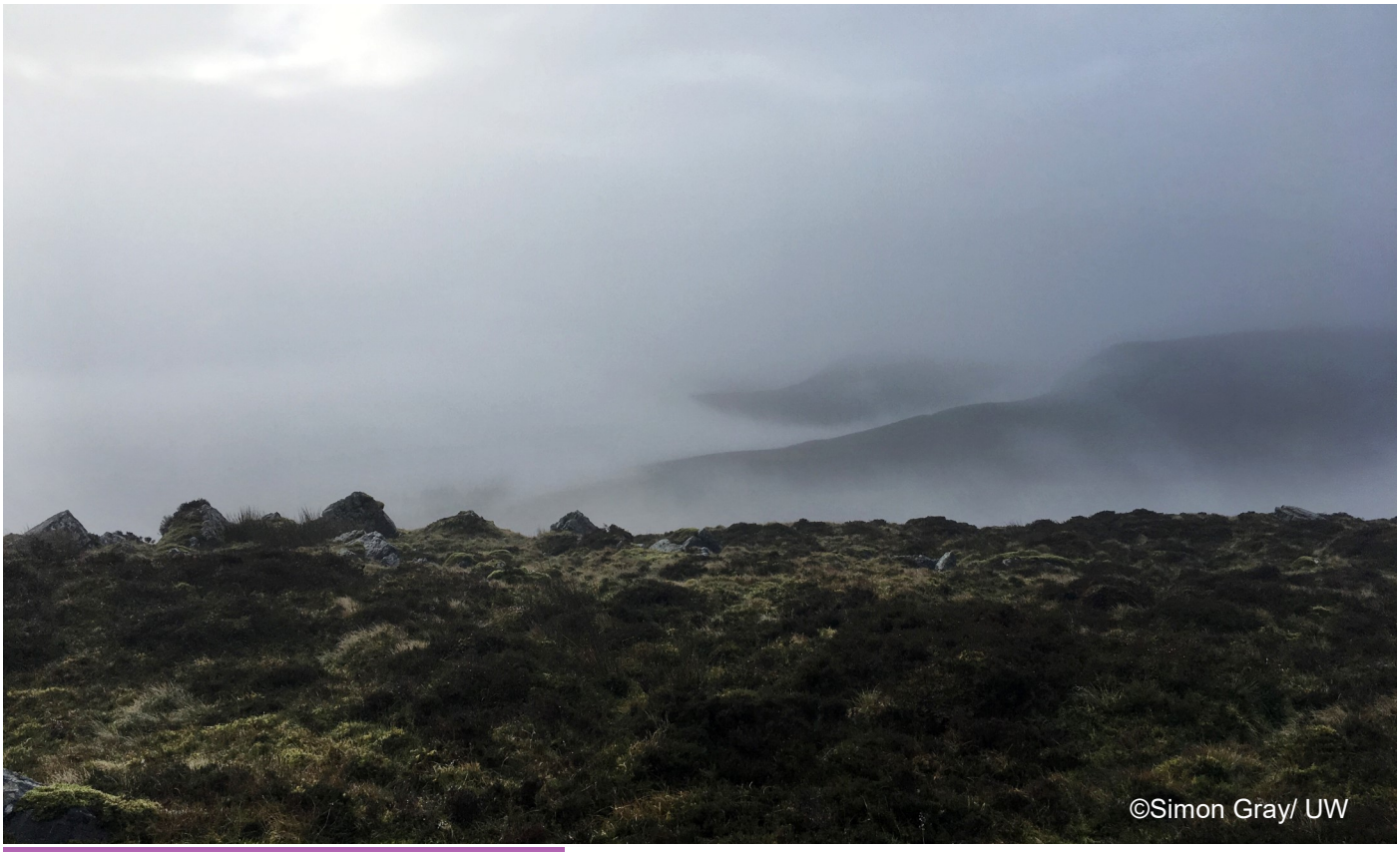

COLLABORATIVE ACTION for the NATURA NETWORK

CANN

Newsletter Edition: 3

December 2019

The CANN project is supported by the EU's INTERREG VA Programme, managed by the Special EU Programmes Body (SEUPB).

CANN Project wraps up warm for winter

As the dark evenings close in, this third edition of CANN's bi-annual newsletter will remind you of the joys of summer – the sound of insects buzzing above a moorland pool and the smell of heather in the sunshine - as well as show some of the hard winter work that is underway and planned in the cold wet season when sensible people are tucked up by their fires .

As the project progresses we discover more and more about the wetlands and uplands, and the animals and plants that call them home. Some of these species we are recording for the first time were probably always present, and it is just that now there is someone surveying them. However, the improved management of the habitats has also had an influence in directly increasing the biodiversity of the sites.

We hope that you enjoy this taster of some of the successes of the project over the last six months and the glimpse into plans for the next couple of seasons.

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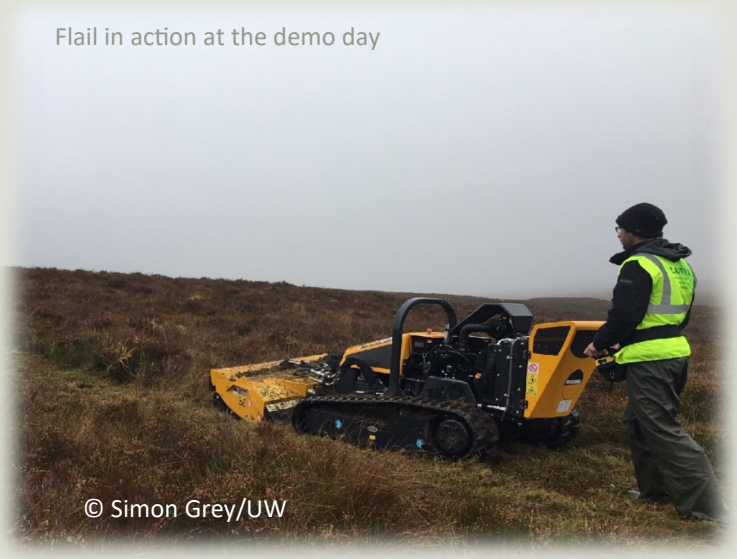
Toys for the Boys (and girls) —a love affair with Robocut

A fabulous new tool was recently purchased as part of the project to prevent and manage wildfire risk on Cuilcagh Mountain, and Cuilcagh-Anierin Uplands SAC and the teams can't stop raving about it. The Robocut is what we call it, but the technical term is a Remote Vegetation Management Machine. Robocut is made by McConnel's, an English company that specialises in agricultural machinery particularly flails and hedge-cutters.

Robocut was developed in response to the dangers of using cutting machinery in steep or uneven areas. More than 6500 people are injured in the UK annually by accidents involving lawnmowers and other cutting machinery tipping over or through being hit by flying debris. Both these risks are avoided by Robocut type machines that separate the machine from the driver by using remote control significantly lowering the dangers to our staff.

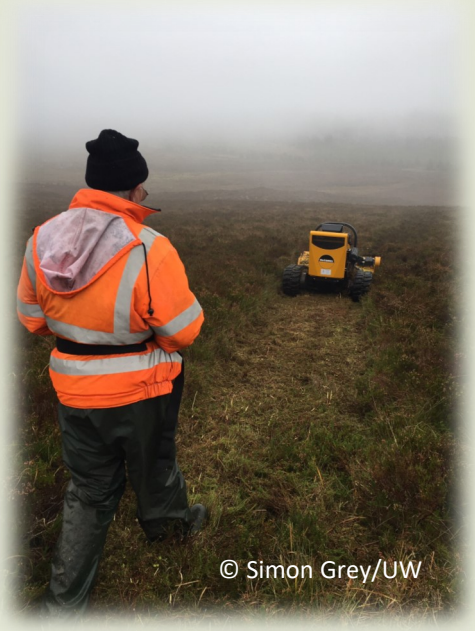
The machine is about the same size as a ride-on lawnmower with hydraulic arms at the front which accept different attachments varying from snow-blowers to ploughs and buck-rakes, but CANN workers mainly use the flail head that clears a track about 1 m wide. The flail itself comes in a variety of forms from light grass flails to heavy-duty hammerheads for heather and gorse and even a mulcher-head that can munch through stems up to 5cm across.



Originally used for forestry works to keep fire breaks clear, conservation organisations have begun to see the benefit of using these machines in remote areas with rough terrain where even a quad or a tractor can be dangerous. CANN workers approached the Moors for the Future Partnership in the Peak District and discovered that they had had great success with a similar machine managing purple moor grass and heather. They also mentioned that landowners had a massive interest in it, and it was as good for outreach and engagement as it was for managing rank vegetation.

The Robocut runs on a 40 hp diesel engine, and the remote control is just like any toy or gaming console, with a joystick controlling everything from the height of the cut to the revs of the motor as well as the direction of the flail head itself. The operator can actually stand up to 150 meters from the machine, but our workers generally stand no more than 30m away so they can see potential hazards such as drains and stones.

Up till now, the team have only been carrying out heather management, cutting leggy plants to encourage healthy regrowth. But they have great plans for managing scrub on various sites, particularly at Tully Bog near Omagh in Tyrone, where trees are sucking the life out of the bog. They hope to be on-site here in January and February if they can get the right



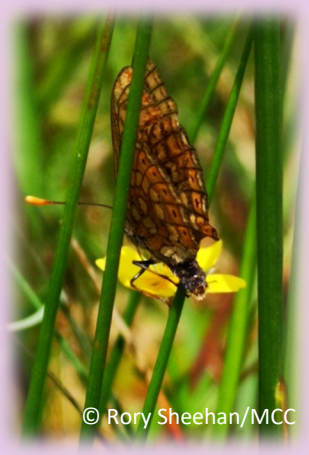
Robocut disappearing into the mist, demonstrating its remote control mode

conditions. Scrub clearance will also be on the menu for nearby Cranny Bogs which has a remnant of some beautiful species-rich grassland. The landowner at Cranny Bog is keen to bring back some traditional grazing to the site, so we hope that Robocut will be able to pull back some dense scrub to get the animals in. The magnificent machine will also be able to tow the scrub away from the site on a trailer. Once grazing is established, the landowner can bring it into the agri-environment scheme and continue proper management on the site.

Another site where it is planned that the Robocut will come in useful is Montiagh's Moss SAC which is managed for Marsh Fritillaries as part of the CABB project (Cooperation Across Borders for Biodiversity) with whom we are developing very positive relationships. Work is planned there with the RSPB cutting rank purple moor grass in February 2020.

Two new marsh fritillary sites on Sliabh Beagh

During July of 2019, adult Marsh Fritillary butterflies were recorded from two new locations on the Sliabh Beagh site. One adult was found in the Northern Ireland end of the site with the other in the Irish side of the site. Both new locations were several kilometres from the previously recorded populations. The Marsh Fritillary is Ireland's only European protected insect, listed as an Annex 1 species under the habitats directive. This beautiful orange butterfly only flies for a short while in the summer. The caterpillars can only live on and eat one plant, the Devil's-Bit Scabious. This plant only grows on land that is being used for low-intensity agriculture with no fertiliser. This kind of land is a haven for all types of nature and wildlife, and the Marsh Fritillary is not alone in thriving in these conditions.



Marsh fritillary on Sliabh Beagh

This bit of the world gets a clean up

To celebrate World Clean-Up day 2019 on the 21st of September, Monaghan County Council's Heritage and Environment sections collaborated with the CANN project to hold a clean up event on Sliabh Beagh. The Environment section arranged a talk, a walk, and litter picking equipment for interested members of the public. The CANN project and heritage section gave a talk on bog protection and conservation and helped with the rubbish collection. The kids at the event had a fantastic day, filling many bags with discarded rubbish and learning all about how long it takes for litter to breakdown. The children found it particularly interesting to discover that food waste discarded by hill walkers who may think of it as organic and not really litter, can last for years in our climate without breaking down. For example a banana skin will take two years to rot away and an orange peel takes six months!

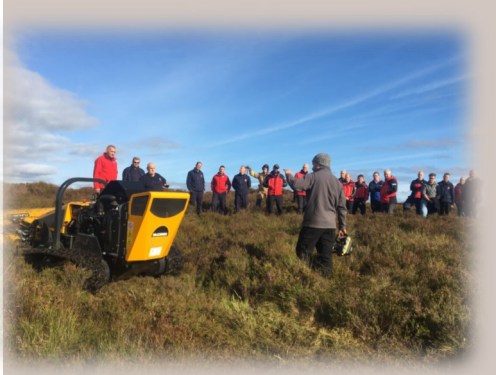
Hard workers on Sliabh Beagh

More Robocut news

As you may have seen earlier in the newsletter, all the CANN team are infatuated by our new Robocut, but the love affair has spread far afield to different sites and with many different organisations and potential new partners.

Its first use was in cooperation with Monaghan County Council, Blackwater Catchment Trust and the local gun club to look at managing an area within the Sliabh Beagh SPA for red grouse. We trained members of the Catchment Trust and the landowner and they were able to cut strips in the heather providing both open feeding areas and sheltered cover for the birds. While this habitat was being created, the team invited gun clubs from Cavan, Leitrim and Donegal as well as neighbouring landowners to come and see the machine in action. This outreach was useful on multiple levels, particularly as it was a northern NGO (Ulster Wildlife) working with a southern local authority and local gun clubs to carry out conservation. This cross border work showed how useful the machine is, not just for managing habitat but for engaging with landowners and groups.

In October, a joint training day was held with the emergency services including the mountain rescue, cave rescue, the coastguard and most importantly the fire service. The NIFRS lit a controlled burn just outside the SAC and the machine's effectiveness at creating fire breaks was demonstrated.



NW mountain rescue demonstration day

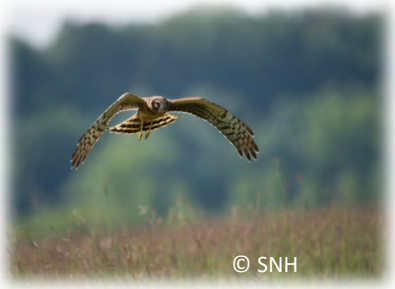
Finally, in November, the team engaged with the South Leitrim Games Council and the Leitrim Development company to help cut areas of leggy heather on Benbrack on the Cavan-Leitrim border to help the red grouse there. This heather growing on Coillte land was historically managed by burning, but this is no longer allowed and the Robocut is a great alternative. Four hectares were managed and the landowners and neighbouring farmers were very interested so we will be definitely be heading out there again next year.

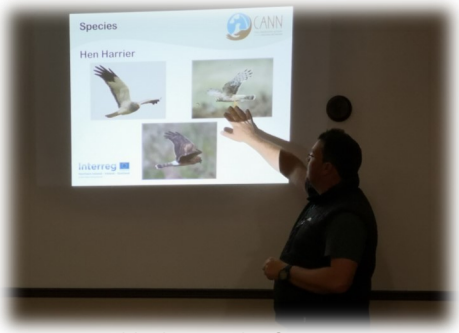
In January we will be following this outreach method again and plan to use Robocut to engage more landowners to discuss the effectiveness of the GLAS scheme in the Cuilcagh Anierin commonage areas.

Rare Bird Talk on Sliabh Beagh

As part of Heritage Week, a national Heritage Council – led initiative, the CANN project, Monaghan Heritage Section and the Golden Eagle Trust held a bird walk and talk on Sliabh Beagh. This event was led by Dr Marc Ruddock from the Golden Eagle Trust. He gave an extremely interesting talk on the different rare birds on Sliabh Beagh. He played recordings of the calls they made and asked the children present to guess which bird matched with each call. A group of budding birders braved the inclement weather to venture out onto Sliabh Beagh for a chance to spot some rare birds, looking in particular for the elusive Hen Harrier.

Hen harrier quartering the ground





Marc Ruddock giving his fascinating talk on the rare birds of Sliabh Beagh

Red Grouse at Moneygall

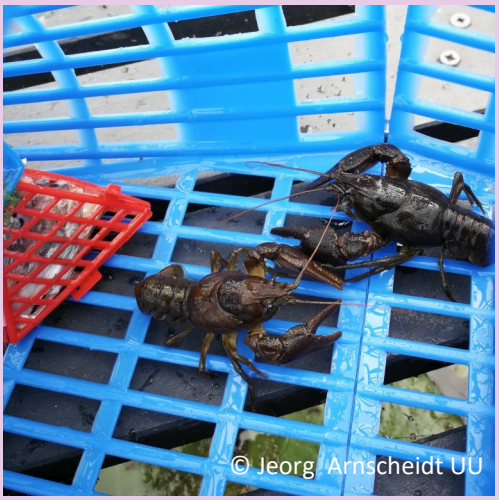
After three years of intensive surveying of lowland raised bog sites managed by Ulster Wildlife and other partners, ecologists from the Golden Eagle Trust have finally observed a female red grouse at Moneygall bog. Despite the on-going work to improve these lowland sites for biodiversity, it is unlikely that this is a bird that has colonised the site from elsewhere but has probably just been lying low relying on its camouflage to remain unseen through all previous surveys. Lowland raised bogs are a rare habitat and are generally surrounded by the green desert of intensively managed agricultural land. They are islands in a sterile sea which few species can cross. Marc Ruddock of the Golden Eagle Trust said, “we have no connectivity between these habitats animals and birds find it difficult to spread or recolonise without this vital green infrastructure”.

Female Red Grouse

“In our upland raised bogs there is a better chance of species spreading as the wetlands are linked by poor agricultural land” he continued, “some species though are more likely to move, snipe, for example, can fly considerable distances and will move into new territories when conditions are right.”

White clawed crayfish, down but not out

The white-clawed crayfish *Austropotamobius pallipes* is the only species of freshwater crayfish native to the British Isles and has priority status throughout the UK and Ireland. While there is genetic evidence for its medieval introduction to Ireland from France, probably for food, the island of Ireland is now the last remaining stronghold for this European species. Across the rest of Europe, this iconic species is under threat from infectious diseases carried by invasive crayfish imported from other continents. The CANN project team surveys cross-border marl lakes that have historic crayfish records. Despite CANN’s intensive search effort with trapping surveys, it would appear their populations have most likely been lost or at least have declined to levels where they cannot be detected by traditional trapping. However, CANN PhD student Raymond Wilson at Ulster University intends to increase the sensitivity of his survey work through looking for Crayfish DNA in water and sediments. He is also investigating the many potential causes for the decline, e.g. exposure to habitat deterioration, water pollution or infectious diseases like crayfish plague. One striking factor is that the lakes witnessing the steepest decline in population all have streams or rivers flowing into them some or all of the time. These inputs increase the risks for transfer of pollutants or disease from a large catchment area.



Crayfish in trap with their trout dinner

On a positive note, the CANN researchers have found what they believe to be a new population of crayfish, albeit at low numbers, in a lake without any historical records. We are currently awaiting confirmation from the museum in Belfast that this is a new site. If this population is confirmed, the fact that this lake is comparatively remote will decrease the risk of the population being affected by the environmental threats of infection or pollution

Amazing insects and where to find them

Tawny Barred Angle

Strange glowing violet lights in the night over Tully Bog near Omagh? Are they Will o' the Wisps or maybe even wicked Jack O'Lantern wandering the bog after murdering a child?

Sorry, wonderful though these old stories are, the answer to the lights over CANN-managed wetlands is far more prosaic. Simply a car-battery-powered moth trap with its ultraviolet lamp attracting moths and other insects into a trap. Once trapped, these moths can be identified in the morning as part of the survey of biodiversity on the site. Over the last year, our volunteer Raymond Elkin has visited Tully Bog more than 20 times and recorded over 200 species of moth, including some species typical of bogs and heaths like Grey scalloped Bar, the Tawny Barred Angle and the Marsh Oblique Barred.

Researchers looking at invertebrates on other sites have also found some fantastic species. Following on from the discovery of the Desmoulin's whorl snail in the Lecale Fens, ecologists have been doing an in-depth survey to map its distribution. As well as the 1283 tiny snails found during the study, invertebrate ecologist Mark Telfer, also recorded the nationally scarce bug *Stenocranus fuscovittatus* and a bug never before recorded in Ireland called *Delphacodes capnodes*. And on an even smaller scale, he discovered a fungus new to the British Isles that grows on a beetle!

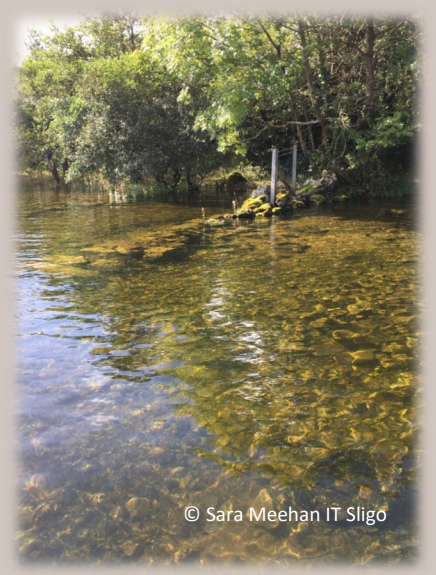
Delphacodes capnodes

Stenocranus fuscovittatus

Biosecurity at Lough Arrow

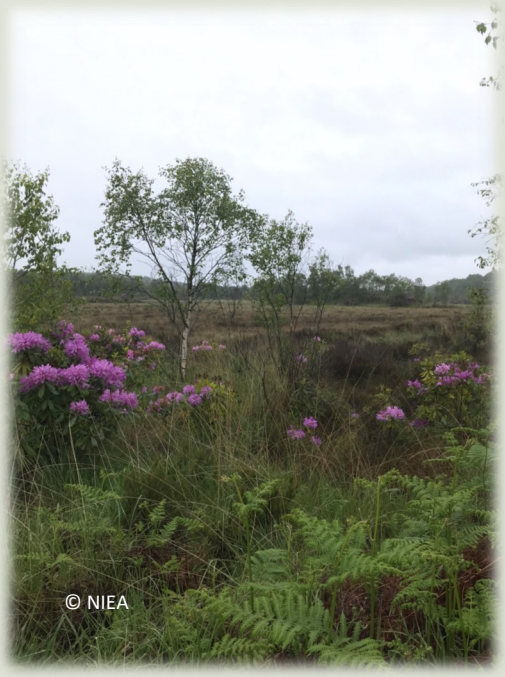
Lough Arrow

Work to investigate and combat the alien invasive pondweed *Elodea nuttallii* on Lough Arrow in County Sligo has continued this year. The Elodia has invaded the lake and is overwhelming the native Charophytes or stoneworts which are green algae that grow on the bottom of alkali limestone lakes. As well as damaging the biodiversity of the lough, the Elodia gets tangled up in the engines of fishing boats causing severe damage. It is easy to transfer Elodia to other water bodies that are currently free of the weed, so CANN has been working with local and visiting anglers to create temporary weed-free lanes by laying down long sheets of jute on the floor of the lough. This has been successful at combating the Elodia while still allowing the Charophytes to grow through the fabric. They have also put in temporary buoys to mark the safe lane and cleaning stations around the lake. They are hoping to have a grand launch of the permanent buoys, further jute laying, interpretation panels and waterproof leaflets for fishing boats on April 17th 2020. This event will be accompanied by school visits in partnership with the Local Authority Waters Programme.



Charophytes on Lough Arrow

Combating Public enemy number 1 on active raised bogs



Peatlands park where rhodi is spreading

The winter stillness of the bog and woodland is shattered with the roar of a chainsaw revving. Winter is the time of year for the battle with rhodedron, (public enemy number 1), to start and contractors at Tully, Drumnafallow and Ballynahone sites have really got down to work over the last couple of months. Rhododendron was first introduced from Asia in the late 18th century. Few people visiting the countryside when *Rhododendron ponticum* is in flower can comprehend the damage that has been caused to our native flora and fauna by this exotic, purple-flowered, Victorian introduction. The plant is responsible for the destruction of many native habitats especially wetland and upland, and for the abandonment of vast areas of land in Ireland and Britain. It can do this because when conditions are suitable, Rhododendron will out-compete most native plants. It will grow up to 10m tall, and its thickly interlaced, impenetrable branches prevent light from reaching the ground. It also sprouts laterally whenever a branch touches the ground, and this means that they are capable of extending well into areas which otherwise would not be suitable for their growth. For example, Rhododendron is capable of dominating large areas of wetland with its canopy, while the main stem and roots of the plant are well back on suitably dry land.

Nearly five hectares of CANN-managed land has been cleared of rhododendron recently, and there are plans to remove much more in the future. Once the tree is cut down, the stump must immediately be painted with herbicide, a delay of even an hour will mean that the tree will have sealed the cut preventing the glyphosate from penetrating. Without herbicide all that will have happened is that the rhododendron will have had a good prune and will sprout with even greater vigour in the spring. The cut branches are also capable of sprouting where they touch the ground, and one solution that is being looked at for this is using the wood to create charcoal in a portable burner. Despite all its faults, Rhododendron burns to make excellent lump wood charcoal which is sustainable and local and far better for the environment than burning imported tropical hardwoods to make charcoal. We will hopefully have more news about the burner in the next edition of the newsletter.

Rhodi cleared in woodland

Mid-Term Conference

The 'Delivering CANN' conference took place on Wednesday 11th September in the idyllic setting of Corick House Hotel and Spa. Set in beautiful County Tyrone, it was the perfect location for the mid-term event that celebrated the conservation work taking place throughout the CANN Project.

The 'Delivering CANN' conference was attended by project partners and governmental bodies to encourage collaborative thinking, learning and action. It celebrated the success of the project as it reaches the halfway point in delivery.

The event was opened by Councillor Charlie Casey, Chairperson of the lead partner, Newry, Mourne and Down District Council. He welcomed almost 100 attendees to hear from three keynote speakers including TV presenter and Wildlife Biologist Lizzie Daly. The host of the BBC Earth Unplugged YouTube channel travelled from her home in Cardiff, to discuss higher level environmental awareness and current environmental issues

Moors for the Future Partnership representative Chris Fry gave an in-depth talk about bog restoration and best practice for working in this vital habitat. The event's proceedings were completed with a keynote address on the importance of good stakeholder engagement. Diana Pound from Dialogue Matters (runner up as UK Environmental Professional of the Year 2019) discussed the challenges and solutions of working collaboratively and used her learning to inspire and motivate those attending to continue working together across borders for environmental conservation and restoration.

Speakers at conference

Project Partners

Lead Partner: Newry, Mourne and Down District Council (NMDDC).

- Agri-Food and Biosciences Institute (AFBI);
- Argyll and the Isles Coast and Countryside Trust (ACT);
- Armagh City, Banbridge and Craigavon Borough Council (ABCBC);
- East Border Region (EBR);
- Golden Eagle Trust (GET);
- Institute of Technology Sligo (ITS);
- Monaghan County Council (MCC);
- Scottish Natural Heritage (SNH);
- Ulster University (UU);
- Ulster Wildlife (UW).

The CANN project partnership also works very closely with National Parks and Wildlife Service (NPWS) in Ireland and the Northern Ireland Environment Agency (NIEA).

Project Funding

The CANN project is supported by the EU's INTERREG VA Programme, managed by the SEUPB. Match funding has been provided by the Department of Housing, Planning and Local Government (Ireland), the Department of Agriculture, Environment and Rural Affairs (Northern Ireland), and Scottish Natural Heritage (Scotland).

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