SUMMER 2016 ISSUE

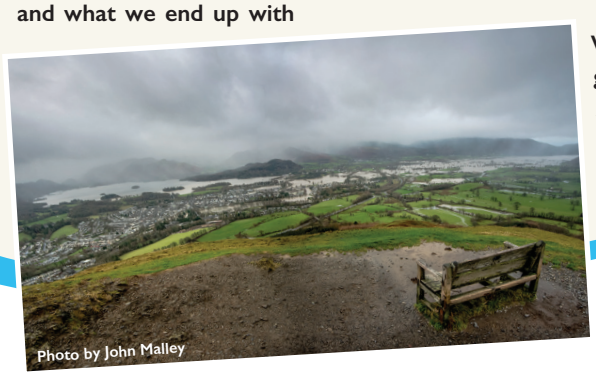
From Beck To Beach

From the Director...

Seven months have now passed since Storm Desmond arrived in Cumbria, wreaking havoc and bringing misery for many people. It has been interesting to see the government's response, and we are encouraged by the efforts to look at different ways of reducing the impacts of flooding at a broader catchment scale. West Cumbria Rivers Trust have always worked on and advocated a catchment-based approach to improving some of the issues within our rivers and becks, and flooding is no exception. No single solution will work to prevent flooding in Cumbria and together with flood defences in towns, the whole catchment needs to be looked at when identifying ways to reduce flooding in communities.

The way in which our catchments and watercourses are managed, and have been significantly managed and modified in the past, makes a huge difference to

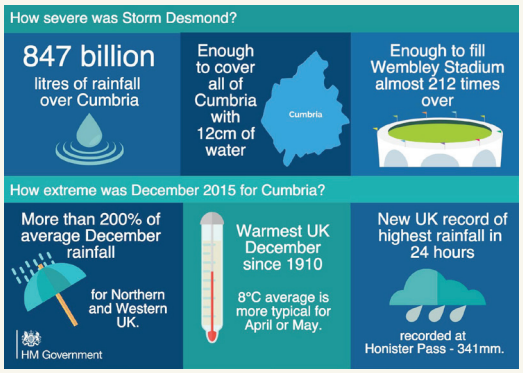
how our rivers react now. Catchments with compacted soil, and very little tree cover encourage water to run-off fast. Couple this with a network of straightened river channels designed to convey water rapidly, and what we end up with



is water running off land quickly, thundering down river channels at great speed, with plenty of energy to pick up lots of gravels and cause erosion as it goes. As soon as the river loses speed either because of a restriction such as a bridge, or where it hits the natural flat floodplain, the water loses its power to carry all the gravels and they are deposited. Not only does this type of catchment modification have serious consequences for communities when it comes to flooding, but it also has impacts on water quality and biodiversity too.

When it comes to undertaking projects to improve our watercourses, much of the work we do involves looking at the whole catchment and working towards restoring natural processes. The results are therefore also multi-benefit, improving flood risk, restoring biodiversity and improving water quality. We are already delivering projects to restore natural river processes such as flood embankment removals (reconnecting rivers with their floodplains), river re-meandering and weir removals. Also through our Catchment Partnerships, assisting with prioritising and co-ordinating the delivery of partner organisations catchment work such as tree planting and peat restoration also restore natural processes. The scale of work required though is vast, and we face huge challenges when we consider them.

We are therefore encouraging the government and the Environment Agency through the Cumbria



Floods Partnership to stick to their words, adopting a true catchment-based approach and incorporating natural flood management measures in combination with more traditional flood management solutions within our built environment,

working towards healthier and more naturally functioning catchments in general.

Only by adopting this approach do we have hope that over time, our watercourses will once again be a community resource to be valued and not feared.

We have an interesting animation explaining flooding processes, options and consequences on our website. Please do take a look.

Jodie Mills
Director

West Cumbria Rivers Trust
Caring for our Lakes and Rivers

Cumbria's New Rivers win Prestigious Prize

We have some great news at WCRT; The Rivers Derwent, Eden and Kent won the 2016 UK River Prize, against stiff competition from river restoration projects in Somerset, London and the Scottish Highlands.

Administered by the River Restoration Centre, the UK River Prize was judged by a panel of experts from around the UK. Our winning project was an excellent demonstration of partnership working to deliver improvements across three catchments, resulting in a healthier and better functioning river environment.

As well as receiving the Nigel Holmes Trophy, named after a hugely influential and passionate river restoration and conservation advocate, the project also received £5,000 to go towards furthering work on Cumbria's rivers.

Many rivers in Cumbria have been 'canalised' which means there are many straight rivers which look more like canals. This has been a common practice for centuries to enable water to get off the land as quickly as possible. They are often very fast-flowing and can support little wildlife. As part of the Cumbrian River Restoration Strategy (CRRS) the Rivers Eden, Derwent and Kent developed projects to put meanders back into these important river systems.

Our Whit Beck project restored 350m of straight channel to a meandering watercourse 1.2km long which is well connected to its floodplain and has lots of habitat for fish and other biodiversity. It also has natural flood management benefits for the community of Lorton by slowing down the flow and allowing gravels to deposit on the floodplain rather than being pushed on downstream.

The CRRS is a partnership project between Natural England, the Environment Agency and three Rivers Trusts (West Cumbria, Eden and South Cumbria).

End of Ellenwise... or is it?

Rosie has been working on the Ellenwise project for over a year, and we now have a huge report which shows all the partners involved just how much we have achieved. Rough estimates suggest a 0.0049mg/l saving of Phosphorus in the Crookhurst Beck so far, along with huge savings in sediment, and nasty bugs which all enter Allonby Bay.

Rosie says, "It's been great getting to know all the farmers in the catchment and being able to help out with lots of projects which save farmers money but more importantly improve water quality. Together we've fenced off over 3000m of beck, planted over 2000 trees and hedge plants, roofed over 2 muck heaps, made 3 effluent tanks, built a soak away, constructed a huge slurry store and re-concreted yards to prevent dirty water entering the rivers, and there's lots more to add to the list."

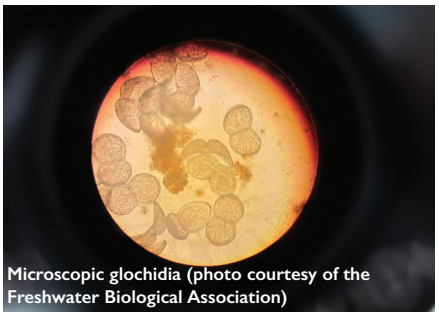
And it's not just the farmers who Rosie's been meeting, she's teamed up with Hayton Castle to show local kids (and adults) exactly what lives in their beck and she's also been pestering a few homeowners to learn a bit more about where their sewage goes – yuk, but no one wants it in the river! And we have been involved in the 'call of nature' campaign which has lots of info about drains and sewage, check out our website for more details.

Lots of farmers from the Crookhurst catchment have signed up to work together on countryside stewardship agreements and together we have put in an application for funds to facilitate this. And that's not it, we've been given a few more months to finish everything off properly and have just heard that the project will be extended for another three years with a PhD student to look into exactly how effective the project is...so its not the end of Ellenwise just yet!

United Utilities
helping life flow smoothly

Artificial Mussel Boost

The freshwater mussel is a remarkable species but is at risk of extinction due to declining river quality. As filter feeders, mussels clean water and are vitally important to the health of our rivers.



Microscopic glochidia (photo courtesy of the Freshwater Biological Association)

The Cumbrian River Ehen is home to the largest and only breeding population of mussels left in England! It is here that the nationwide EU LIFE Pearls in Peril (PiP) Project is seeking to increase the number of mussels using a pioneering technique known as bankside artificial encystment.

Mussels have an extraordinary lifecycle. Every summer, female mussels release millions of microscopic miniature mussels called glochidia into the water. In order to survive, these glochidia must be inhaled by a young salmon or trout and attach to their gills. This is called encystment and is harmless to the fish. The chances of glochidia being inhaled by a fish are slim and it is at this stage we have given them a helping hand.

At the appropriate time, young fish were safely collected from the river and placed in an aerated tank on the riverbank. Under a special licence, a small number of mussels were briefly removed from the river and placed in a sample of river water where they released millions of glochidia. The glochidia were added to the tank with the fish. This maximizes the potential for the glochidia to attach to the gills of the fish. After a few minutes the fish were counted, measured and returned to the river, hopefully carrying the next generation of mussels.

It will be many years before we know if this work has made a difference to the mussel population in the River Ehen but it is one of many activities of the PiP Project to give this special species a greater chance of survival.

pearls in peril

Life

NATURA 2000

The making of 'Salmon Spawning in the Lake District'

Could I film wild Atlantic salmon, underwater, during their annual migration to the rivers of the Lake District? This question was put to me by WCRT last autumn. Careful planning was required, along with permission from the Environment Agency, since it is an offence to disturb spawning salmon.

The Trust's Ian Creighton guided me along St. John's Beck on a crash course in salmon behaviour. Having chosen a likely spot, I attached a small waterproof camera to a pole and carefully lowered it into the chilly water. Reviewing the footage, there at first seemed to be nothing but stones and weed. Then a male salmon, a cock fish, appeared in frame. Encouraged, I lowered the camera back into the water. Another half an hour and other adult salmon had appeared, as well as juveniles called parr.

The next day I filmed a hen fish building a nest, known as a redd. She was using her tail to move pebbles on the river bed, hollowing an area to lay eggs during spawning. Two cock fish were in attendance, competing to mate. I also encountered a cock and a hen basking in sunlight at the bottom of a pool. The hen had recently spawned and was resting before returning to the ocean.

Sadly, for the male, this was likely to be his only journey.

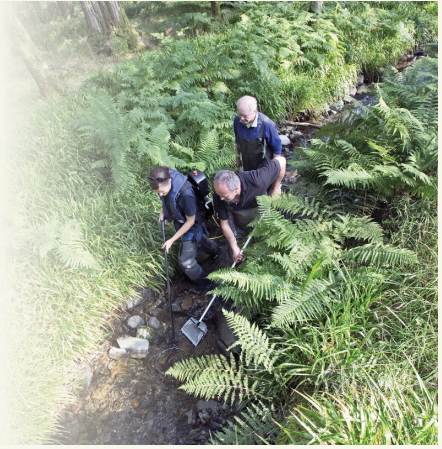
Watching these majestic fish I reflected on how remarkable it was to find them here, far from the sea. For me, the making of this film has opened a window into the hidden lives of salmon in the heart of the Lake District.

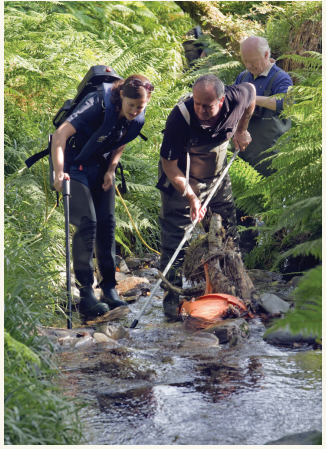
Aaron Watson is Creative Director at www.monumental.uk.com. 'Salmon Spawning in the Lake District' can be viewed on the Trust's website: http://westcumbriariverstrust.org/news/new-film-salmon-spawning-in-the-lake-district

MONUMENTAL
Moving Image, Design & Visualisation

Electrofishing

Our first venture into an organised electrofishing project in 2015 saw the start of what we hope will be a long term partnership with local angling interests on the Derwent.





Photos: By John Macfarlane

This work is crucial in helping us to develop records and a database of salmonid fry location and numbers whilst also providing detail of other fish species, populations and habitats found at each survey site. Going forward these surveys will enable us to demonstrate fry population trends, while the systematic habitat surveys will allow us to determine the "catchment condition" which will prove invaluable in helping to pinpoint where future investment in our catchment is most needed.

Our plans for the 2016 surveys are in an advanced stage of development and as well as surveying a greater number of sites we are planning to liaise closely with EA monitoring officers to ensure the best possible coverage from our combined resources.

The project is wholly funded by fisheries interests from within the Derwent catchment, with WCRT staff acting as the full time focus for the field work with assistance from a growing band of enthusiastic local volunteers.

2015 has been a great start for this project and we at WCRT are keen to see this concept grow to deliver an ever broader range of data over a growing proportion of the catchment in future years.

If you would be interested in volunteering for at least 3 days over the summer please contact info@westcumbriariverstrust.org

The full report and this year's project plan are freely available on our website at westcumbriariverstrust.org/projects/electrofishing-surveys.

West Cumbria Rivers Trust welcomes its first River Giver

By Ruth Taylor

River Givers is the new fundraising scheme launched by West Cumbria Rivers Trust and is a great way to get involved and contribute to the upkeep, protection and improvement of West Cumbria's lakes and rivers.

There are various levels of donations that can be pledged for the scheme and the benefits of becoming a River Giver are: five trees planted every year of membership, a membership card, West Cumbria Rivers Trust newsletter delivered to your door, a car sticker, priority invitations to West Cumbria Rivers Trust events and a site visit upon request. The money donated through the River Givers Membership Scheme will be spent on river improvement projects, some of which include improving resilience to flooding.

The first River Giver, Angela Pitt from Portinscale near Keswick has become a life member of the River Givers scheme and her five trees for 2016 were planted at Hayton Castle by local school children.

Angela highlighted her reasons for her generous donation, "I saw the information at the River Greta exhibition at the Keswick Museum and was very happy to become a River Giver to support all the work that the trust does.

My partner and I have enjoyed the chance to help "clean" the River Derwent over the last two years and I hope to be able to volunteer with the trust in the future."

Donations for the work West Cumbria Rivers Trust undertakes are always gratefully received. Please see our website www.westcumbriariverstrust.org for more information.

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