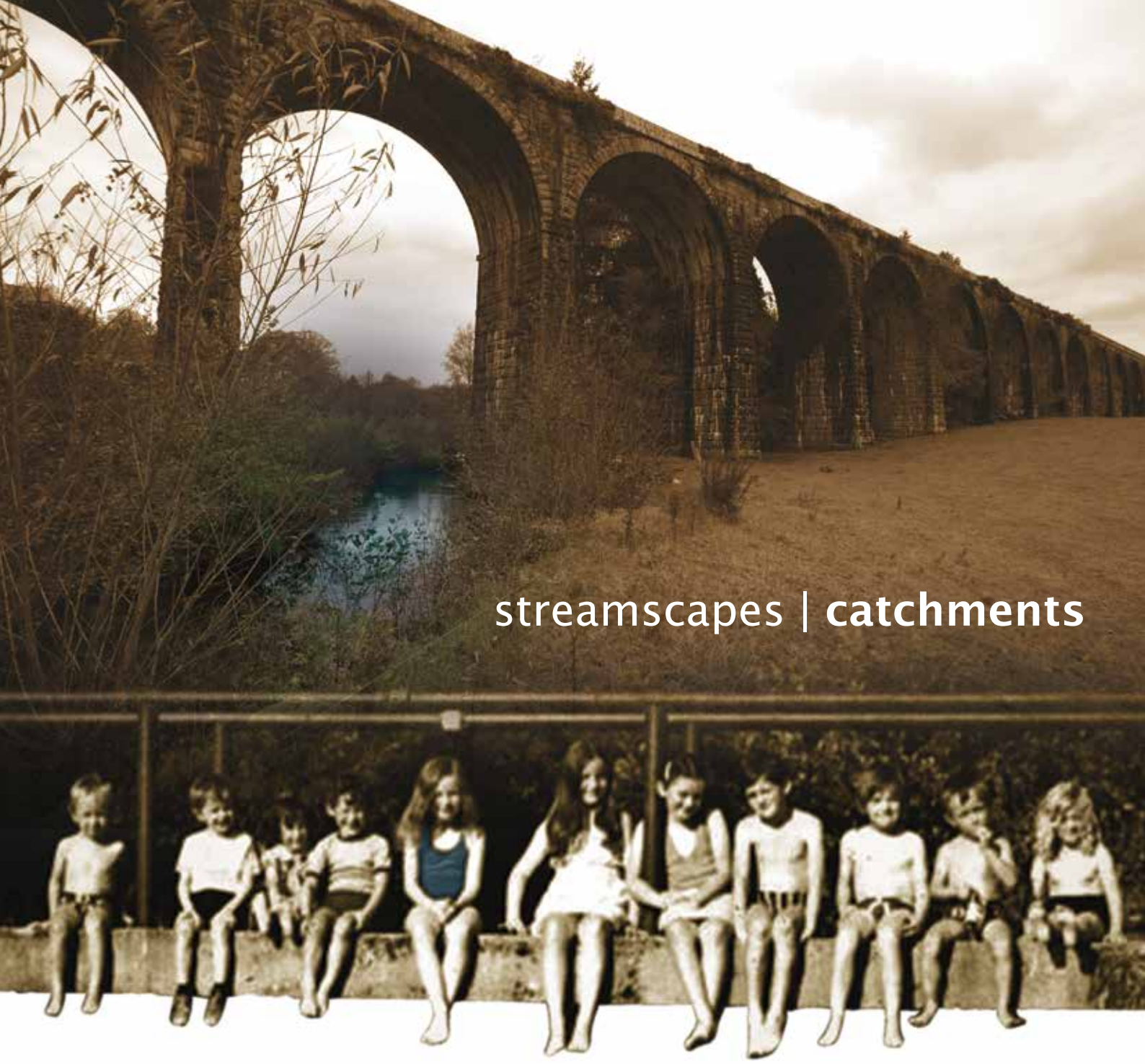

streamscapes | **catchments**

The Rivers of Borris County Carlow

From the Blackstairs to the Barrow

A COMMUNITY PROJECT 2019

Local Authority Waters Programme

vibrant communities | catchment assessment | healthy waters

streamscapes

the waters & the wilds

www.streamscapes.ie

SAFETY FIRST!!!

The 'StreamScapes' programme involves a hands-on survey of your local landscape and waterways...safety must always be the underlying concern. If you are undertaking aquatic survey, remember that all bodies of water are potentially dangerous places.

Slippery stones and banks, broken glass and other rubbish, polluted water courses which may host disease, poisonous plants, barbed wire in riparian zones, fast moving currents, misjudging the depth of water, cold temperatures...all of these are hazards to be minded!

If you and your group are planning a visit to a stream, river, canal, or lake for purposes of assessment, ensure that you have a good ratio of experienced and water-friendly adults to students, keep clear of danger, and insist on discipline and caution!

Thanks to the following people and organisations for supporting the Borris Rivers Project:

Field Trip Site Landowners - John and Mary Joyce

Councillor Willie Quinn

Borris Tidy Towns

Blackstairs Farming Futures - Owen Carton & Peter Rose

Borris Anglers - Garrett Kiernan

Borris Our Vision

Mags Quinn, Borris Town Hall

Borris National School – Principal: Mary Behan
Teachers: Michelle O'Sullivan, Pat Coady

Jessica Mason, Sinead Jackson, Vincent Murphy StreamScapes

Borris Vocational School – Principal: Olivia Kennedy; Teacher: Jacqueline Sheil

Photography: Fintan Ryan, Padraig Kavanagh, Aoibheann Murphy, Fergal Murphy

LAWPRO / Ann Phelan

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WELCOME TO THE DININ & MOUNTAIN RIVERS...THE RIVERS OF BORRIS, COUNTY CARLOW

The key ambitions for Borris as set out by the community in the **Borris - Our Vision** report include 'Keep it Special' and to make it 'A Good Place to Grow Up and Grow Old'. The Mountain and Dinin Rivers flow through Borris and into the River Barrow at Bún na hAbhann and the community recognises the importance of cherishing these local rivers and the role they can play in achieving those ambitions.

Many people have fond memories of swimming and fishing in the Dinin. Unfortunately, it has become virtually inaccessible and the quality of fishing has diminished vastly over recent years. The aim of the Borris Rivers Project is to raise awareness within the community, gather local knowledge and memories about the river, find out more about the nature on our doorstep and involve children in this 'outdoor classroom'.

These rivers are the hidden gems of Borris. Restoring the historic lanes of Borris and connecting to the former railway, the Barrow and the Dinin River is seen as a key project by the community to enhance the heart of the town. On a larger scale, positioning Borris as a hub at the centre of a network of looped walks and longer distance walks along rivers and into the mountains is a strategy which the community recognises can bring sustainable growth to Borris.

BORRIS COMMUNITY GROUP

As part of the Borris Rivers Project, we participated in a StreamScapes-led Field Trip along the Dinin River where we learned about the River's Biodiversity, before returning to the Community Hall for further discussion on issues and initiatives in our Catchment, followed by a superb slide show from Fintan Ryan, and presentation on the Blackstairs Farming Futures Project from Owen Carton. A big part of our engagement with the River involves hearing the stories of the past and determining our vision and aspirations for the future.

> *"The Dinin was a wonderful river in my boyhood days, full of trout, sticklebacks, stone loaches and eels, not to mention all of the 'creepy crawlies' under the stones and the fronds of water weeds. A high point was the lamprey migration, with the weirs being coated in elvers, and the Mountain River had mussels. Drainage in early 1950's changed the pools for fishing, then the river bank being slowly overwhelmed with trees and bushes and becoming inaccessible over the last 40 years or so. In my day the bank was cleared by locals for firewood and access for water and fishing. I never had a bad day fishing, getting up to seven fine trout. It is now completely overgrown but there are hardly any trout now and very little sunlight gets through the foliage.*
>
> *I remember on summer evenings, going fishing to Ballymartin with Jim Fleming RIP, John's dad. We would head out on bikes about 6 pm, fish for an hour or two, and then head back, as Jim had to be back for the cinema where he was the projectionist! There are new efforts to get our environment and our water quality right once again; I want to see the youth, and future generations of Borris, experience and enjoy the wonder that we had access to when we were young."* - FINTAN RYAN

BORRIS NATIONAL SCHOOL

On the 4th of October 2019 StreamScapes teachers Jessica and Sinead came to our school to teach us about our local river. They said that we would be 'Bio-Monitors' for the day, learning about the life in our river to find out about its water quality. We got an introduction before we went down for our Field Trip, a slide show to tell us what to expect. We had to wear wellies, and use nets and buckets to catch the creatures in the river, and then we learned how to identify what we found.

We found freshwater shrimp, pondskaters, mayfly nymphs and we caught a stonefly nymph too. From this we decided that the Dinin River water quality was 'Q4' (out of a 1 to 5 scale). After this we played some games about what we had learned, including a Foodweb game and 'Kung-fu Hydraulics'. Aoibheann Murphy was the person who organised this for us, so we are all very happy she did. We had a lot of fun, and we would recommend it. I would definitely do it again!

BORRIS VOCATIONAL SCHOOL

Our TY Geography class did a Project on our local Dinin River (also known as O'Shea's River) titled, 'The Catchment Around Us'. The Dinin was a well-known river in the past, where everyone from Borris would spend their summer holidays down at the river. However, over the years people have stopped going down as it has all overgrown and the water is no longer clean enough nor deep enough to swim in. My granddad, mother, aunties, uncle, and neighbours have swum in this river for many years and it's where I first learned how to swim. So we were all interested in going for a Field Trip and learning more about our river. From our studies we learned that all living creatures need four main resources: Oxygen, Clean Water, Food, and Shelter. Jessica and Sinead from StreamScapes taught us the 'kick & swoop' method to catch bugs from the river bed, collect our findings into trays and identify them using the Identification Key so that we could understand how local water quality is determined. We also discussed 'Best Practice' to learn how we can reduce our impacts on local water quality. We, as a group, felt that this activity was an extremely important one as it gave us an insight into what can happen if our water supplies become polluted by things such as plastics, fertilisers, factories, chemicals such as weed killer, riverbank erosion, phosphates, and invasive species such as Japanese knotweed and mink.

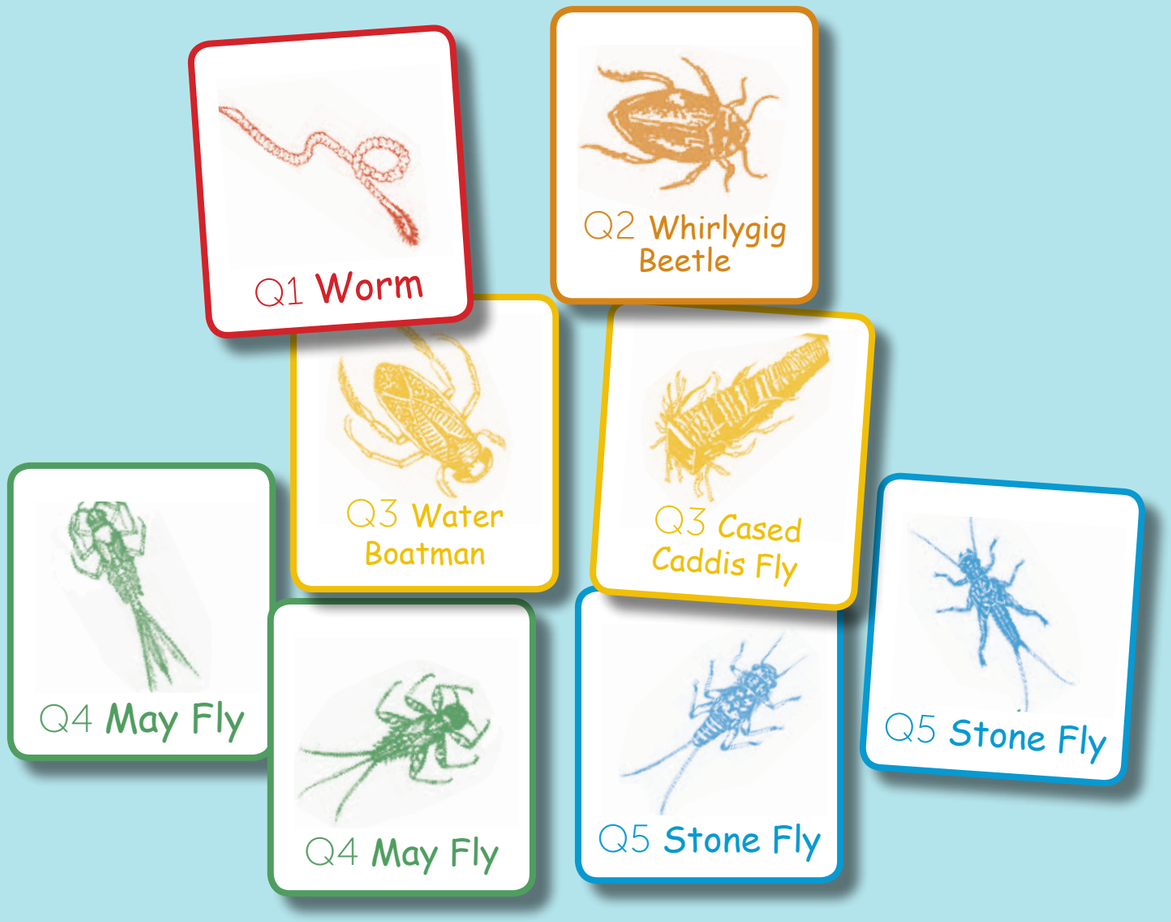
CATCHMENT AREA OF THE DININ & MOUNTAIN RIVERS, BORRIS, COUNTY CARLOW

OUR BUGS

The insects that live in a stream provide indication of water quality in what is known as the 'Q' Scale:

Q1 = Bad	Q2 = Poor	Q3 = Moderate
Q4 = Good	Q5 = High	

What bugs will we find in Our Stream?



Q1 True Worm – Fíor - Phylum Annelida : normally live in silt and mud and can tolerate pollution

Q2 Whirlygig Beetle – Ciaróg Whirlygig – Gyrinidae - Oval, black-bronze sheen: predators/scavengers

Q3 Water Boatman – Bhádóra Uisce – Notonecta glauca: Carry bubbles of air under their wings

Q3 Cased Caddis Fly – Nimfeach Caddis Eitilt - Hydropsychidae: Builds home of twigs or pebbles

Q4 Mayfly nymph – Nimfeach Mayfly - Emphemeroptera Baetis: Very sensitive to pollution

Q5 Stone Fly nymph – Nimfeach Eitilt Cloch - Dinocras cephalotes: Indicator of the highest water quality

OUR WILDLIFE

If we can achieve high-quality waters in our Catchment, lots of benefits follow.

These pictures show a few examples of the variety of species which we might see in our rivers and along their banks.

Next time you visit the rivers in our catchment area, tick the boxes of any of the species shown here that you are lucky to see... and don't forget to tell your friends and family all about the wild and wonderful nature you've seen.

BLACKSTAIRS FARMING FUTURES

The combination of aging farmer population and low incomes from existing hill farming outputs in the Blackstairs Mountains are leading to an increased risk of land abandonment and pose a threat to the achievement of favourable status of the habitats and species of conservation concern in the Blackstairs Mountains Strategic Area of Conservation (SAC). The 'Blackstairs Farming Futures' Project aims to develop a new revenue stream for commonage farmers in the Blackstairs Mountains for the delivery of innovative eco-system services whilst simultaneously improving habitat condition in the Blackstairs Mountain SAC and adjacent habitats including peatlands, heathlands and grasslands. In addition, the Project seeks to a) improve Red Grouse habitat; b) contribute to the development of an effective Commonage governance model for Ireland, and; c) engage the wider community in awareness of the environment, culture, and tradition of farming in the uplands.

OWEN CARTON -
www.facebook.com/blackstairsfarming

LOCAL WATER QUALITY: Status & Objectives

Under the European Water Framework Directive, Ireland must achieve and maintain good ecological status for all waterbodies, and through the 'River Basin Management Plan' many rivers, lakes, estuaries and coastal waters have been selected as Priority Areas for Action (PAA). Extra effort will be made in these areas to find the sources of pollution and other pressures that might be affecting water quality. Borris' Mountain River is one of 43 PAAs in the South East, as it has a high ecological potential to support fish species as well as wider Biodiversity. The Local Authority Waters Programme (LAWPRO) was set up to help communities, local authorities and state agencies work together to improve and protect our waters. This includes assessing these Priority Areas for Action and helping to find solutions to the problems. Catchment scientists are currently investigating the ecology and chemistry of the Mountain River to identify the pressures which are acting upon it; based on this, measures will be recommended to improve water quality for the benefit of the Mountain River Catchment.

ANN PHELAN, LAWPRO - watersandcommunities.ie/about/

THE DININ & MOUNTAIN RIVERS: HABITATS & SPECIES

The Blackstairs Mountains, which peak with the 795m Mount Leinster, range away to the east of the town of Borris, and it is from the Blackstairs that the Rivers of Borris flow. To the south of this lofty summit may be found the source of the Mountain River **(FW1 Eroding Upland River)** at an elevation of 460m in an area dominated by upland heath vegetation including ling heather, before plunging through patches of rare Dry Heath habitat **(HH1 Dry Siliceous Heath)**. In the middle elevations, the river passes through similarly rare areas of Wet Heath **(HH3 Wet Heath)**, then enters a narrow ravine where it cascades more than 300m in the 2km it takes to reach Rathanna Bridge. Easing, the Mountain River flows through farmland **(GA1 Improved Agricultural Grassland)** where it is joined by the Killedmond stream, the source of which is also near Mount Leinster. Down through Lacken Cross Roads and under the nearby bridge, the river broadens out and is lined with sycamore, willows and elder and, meandering on, passes areas of planted forestry **(WD4 Conifer Plantation)** and through low farmland, mostly cattle and sheep grazing **(GS4 Wet Grassland)**, though some dryer fields allow tillage **(BC1 Arable Crops and BC3 Tilled Land)**. Thereabouts the Glasheroge Stream emerges from under Bowe's Bridge to join the Mountain River and together, after another kilometer, glide under the old railway bridge ('The Viaduct'). At the southern end of the town (Lower Borris), the Mountain River passes under the main road and into a heavily wooded and steep sided valley where it then mingles with the Dinin River.

The Dinin (pronounced 'dye-nin') is known by many names...Black, O'Shea's or the Corries River; the upper part of the system consists of a collection of headwater streams in the area around Garryhill, most of these upstream tributaries rising around the Swing Cross Roads, about 4km east of Bagenalstown. Upstream of Corries Bridge is hilly with a mix of forestry and tillage farm land. Downstream, the river passes through good quality farm land as it nears the north of Borris around Clonygoose. As the Dinin approaches Borris it gets into a wooded area and flows around the eastern and southern outskirts of the town, before the then conjoined Dinin and Mountain Rivers flow for 1km through steeply sloped woods and pass under Bunnahown Bridge and the old Barrow Tow Path to their confluence with the majestic River Barrow.

Due to the presence of several rare habitats, as well as the endangered Freshwater Pearl Mussel (which, though threatened, have been recorded on several sites on the Mountain River both up- and down-stream of Borris), the Catchment is listed within the 'River Barrow and River Nore SAC' (Special Area of Conservation). Occurrence of migratory salmonids (trout & salmon) are down, but there are anecdotal accounts of new arrivals, including Pine Martens, Comma butterfly, woodpeckers, buzzards, little egrets and even an osprey siting. With hope the Borris community resolves to become aware of our habitats and species, and to 'turn the tide' to achieve high-status local water quality and biodiversity.

VINCENT MURPHY, StreamScapes Consultant
(Habitat classifications from Fossitt, J.A., 2000; 'A Guide to Habitats in Ireland')

Home Truths

The StreamScapes method views our toilets, sinks, baths and showers as Tributaries to our Rivers! What we put in them has a huge capacity to impact on local Water Quality and Biodiversity. Outside our homes in our gardens and yards we have an equal ability to create or destroy natural habitats. These tips will help restore water quality & biodiversity:

What is Biodiversity?

Biodiversity, or "Biological Diversity", refers to the sum total interdependent web of life, from bacteria, microscopic algae, fungi, through to plants, trees, amphibians, fish, birds and mammals - and people!!! If we achieve "best-practice" we can greatly assist our community's capacity for Biodiversity.

Salmon

The status of Salmon in local rivers is a great indicator of local environmental quality. When they are present, they are proof that multiple terrestrial, instream, and marine habitats are in balance. This is because salmon depend upon an entire suite of other, similarly sensitive organisms to thrive... Biodiversity!

HOUSEHOLD BEST PRACTICE

- Avoid any Cleaning Products with Phosphates or Bleach - they spoil the good work of your sewage treatment plant / septic tank, leading to aquatic pollution - use 'eco-friendly' products!
- Use the minimum of any cleaning product - enough is enough!
- Do not use in-sink food macerators (they put added strain on sewage treatment) - compost your vegetable wastes and use as fertiliser in your garden!
- Any common household product labelled Hazard or Poison or Irritant must be treated as toxic waste when disposing of - follow Local Authority guidelines and do not put in drains!!!
- Keep your garden low-maintenance and low water-dependent, but covered in established sod (and not hard-surfaced) to avoid contributing to peak urban rainfall run-off. Use native plants and trees to establish suitable local habitats.
- Avoid herbicides, pesticides, and application of fertilisers - find natural ways to garden.
- Finally, control your use of water at home and in the garden...treat it as the precious substance that it is!

Instream Insects

Did you know that a survey or census of the bugs that live in your local river reveal the environmental quality of the water? Stone flies, mayflies, and cased caddis fly larvae are amongst the most pollution-sensitive aquatic bugs... if you find them in your river it is a good sign! And another good example of Biodiversity in action.

Freshwater Mussels

The study of Biodiversity is full of wondrous stories... the Freshwater Pearl Mussel (FPM), which used to live in most of Ireland's rivers but is now considered extremely threatened, is the longest lived species, living over 100 years. The microscopic juveniles spend a winter attached to a trout's gill... this is how they migrate. They are very sensitive to nutrient & silt pollution.

Don't let Nature go down the Drain!

streamscapes
the waters & the wilds

Coomhola Salmon Trust

A StreamScapes Publication
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