

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!



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:

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.
- Remember that disturbed ground contributes silt to local water courses – silts are a major enemy of aquatic biodiversity.
- Finally, control your use of water at home and in the garden...treat it as the precious substance that it is!

Don't let Nature go down the Drain!

This Project is supported by Monaghan County Council and The Department of the Environment, Community and Local Government in the Republic of Ireland, Blackwater Regional Partnership and the Heritage Lottery Fund of the National Lottery in Northern Ireland. The project aims to promote awareness and community engagement in maintaining healthy waters and supports a new approach to catchment management

Cover photo: Connolly's (Cappog) Bridge, Ballinode, Co. Monaghan by Dan Curley
 Maps by Gilly Cullen (www.gillocullen.com)
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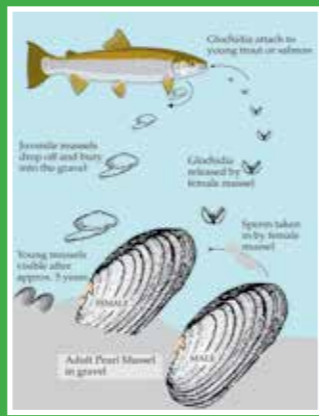
Instream Insects

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.



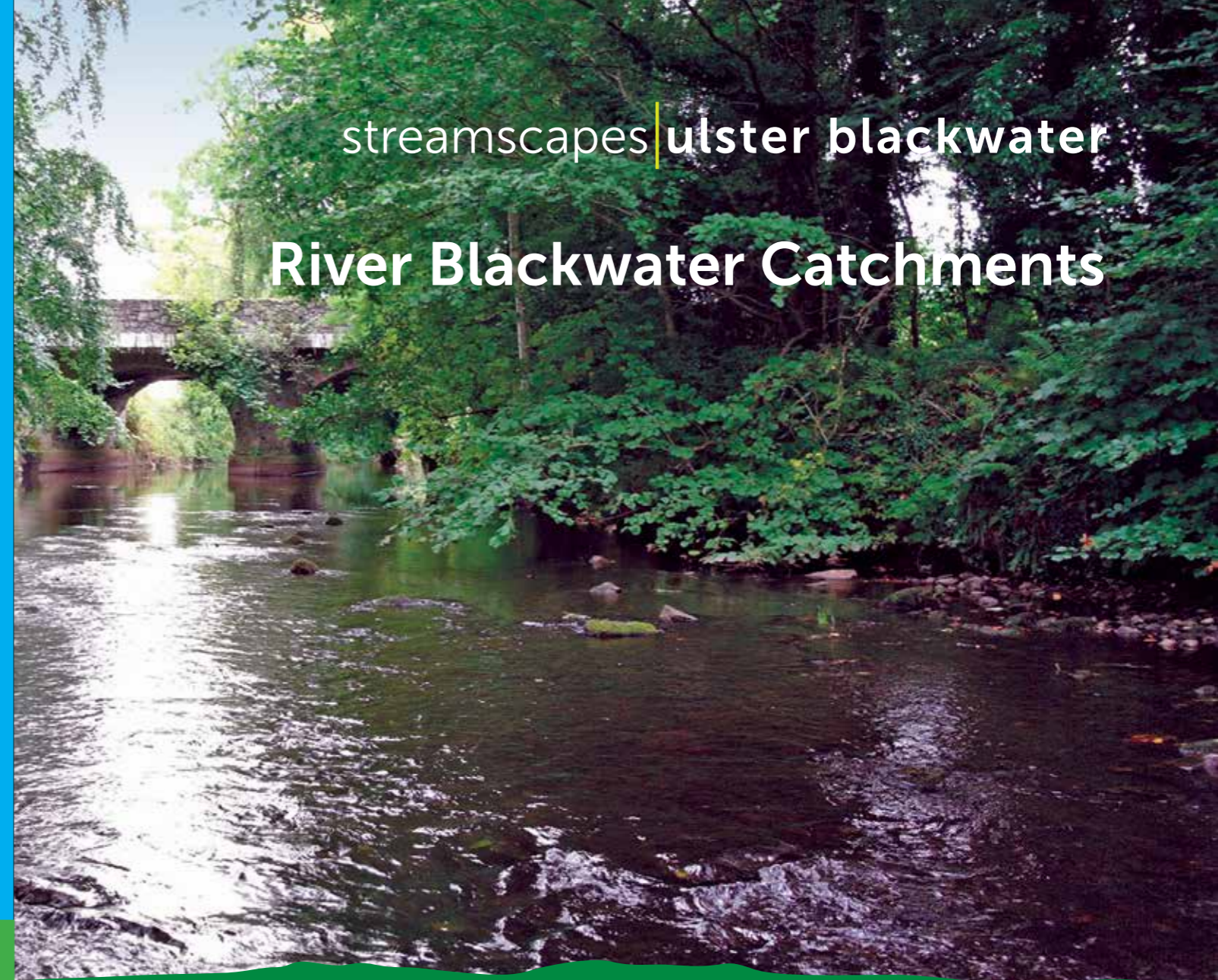
Freshwater Mussels

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.



streamscapes | ulster blackwater

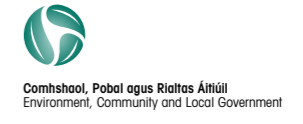
River Blackwater Catchments



Tacaíonn Comhairle Chontae Mhuineacháin agus An Roinn Comhshaoil, Pobail agus Rialtais Aitiúil leis an dtionscnamh SruthLinte Abhainn Mhór Uladh. Is í aidhm an tionscnaimh ná feacht agus baint an phobail a chur chun cinn maidir le huiscí folláine a chaomhnú agus tacú le cur chuige nua don bhainistiú abhantrach.

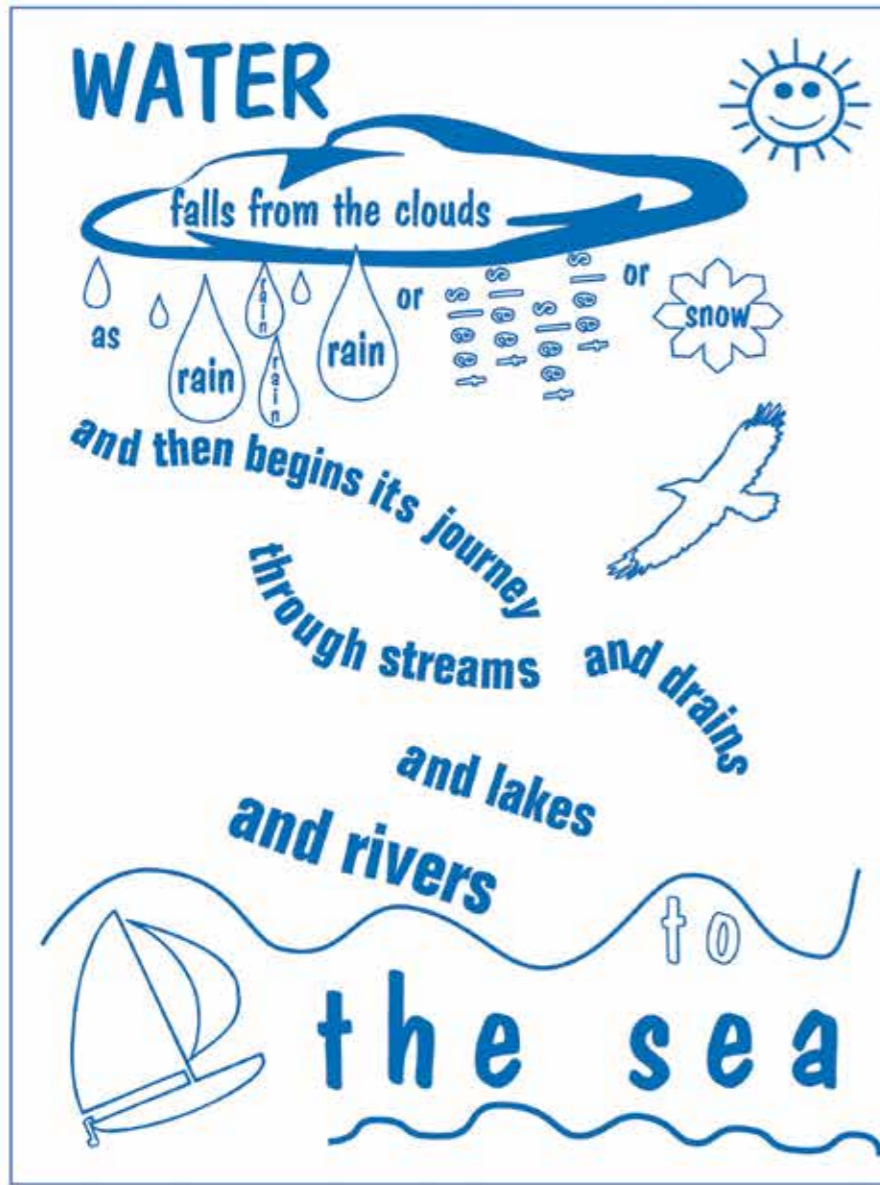
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the waters & the wilds



Welcome to the Water-Cycle!

The River Blackwater's Journey from Source to Sea



But that's only half the story - how does it get up there in the first place?

And what about people????

The water that's on the earth today is exactly the same water that was always here - no more and no less!

Water begins its life perfectly clean but on its way it collects things

All these things need water -



(well ok, maybe not ginger bread people) (or dinosaurs) (but everything else)



Most animals need to drink every day (adult humans 2-3 litres) and die within a few days if they don't.

Some animals don't usually drink but get the water they need in their food



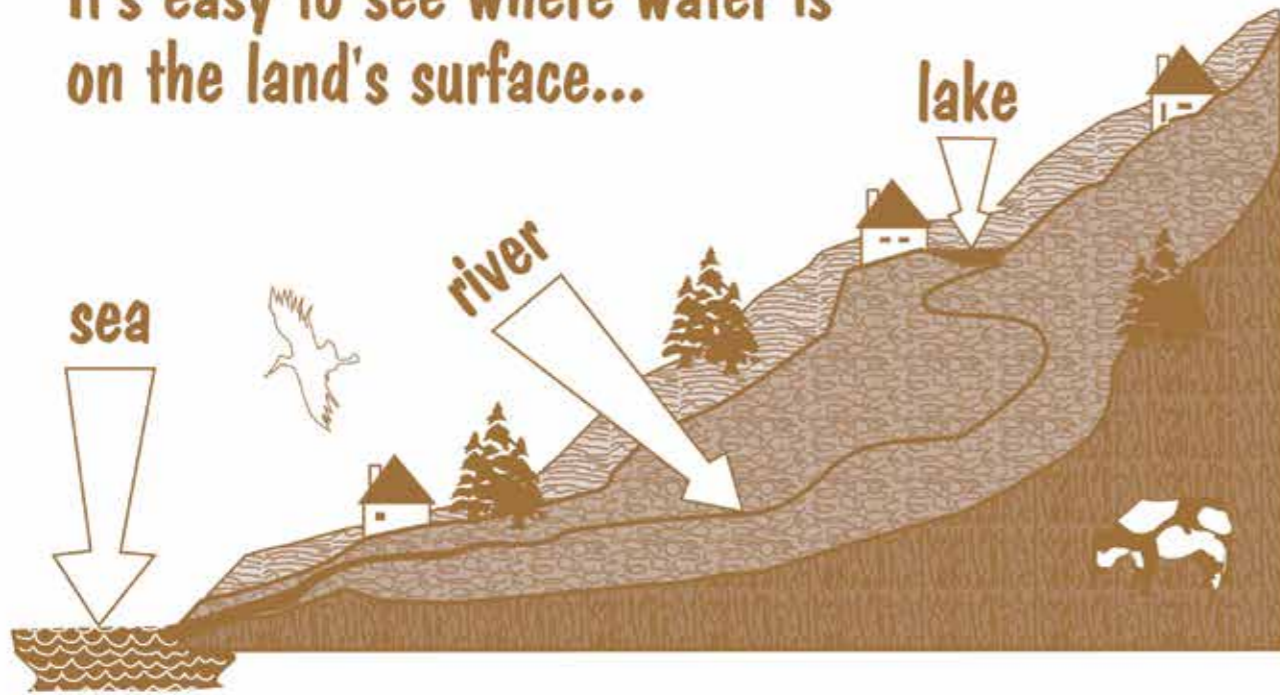
In the summer a big tree needs about 200 buckets-full of water EVERY DAY!

WATER OUT through tiny holes in the leaves.

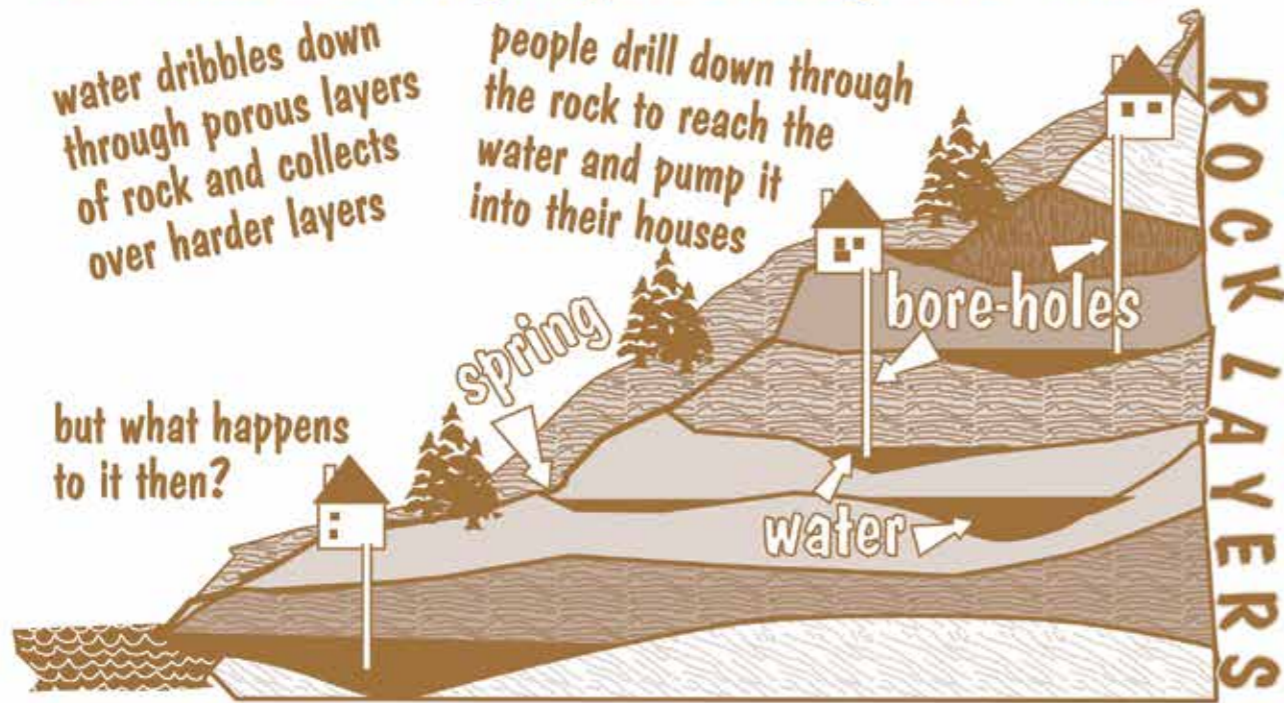


WATER IN through the roots

It's easy to see where water is on the land's surface...

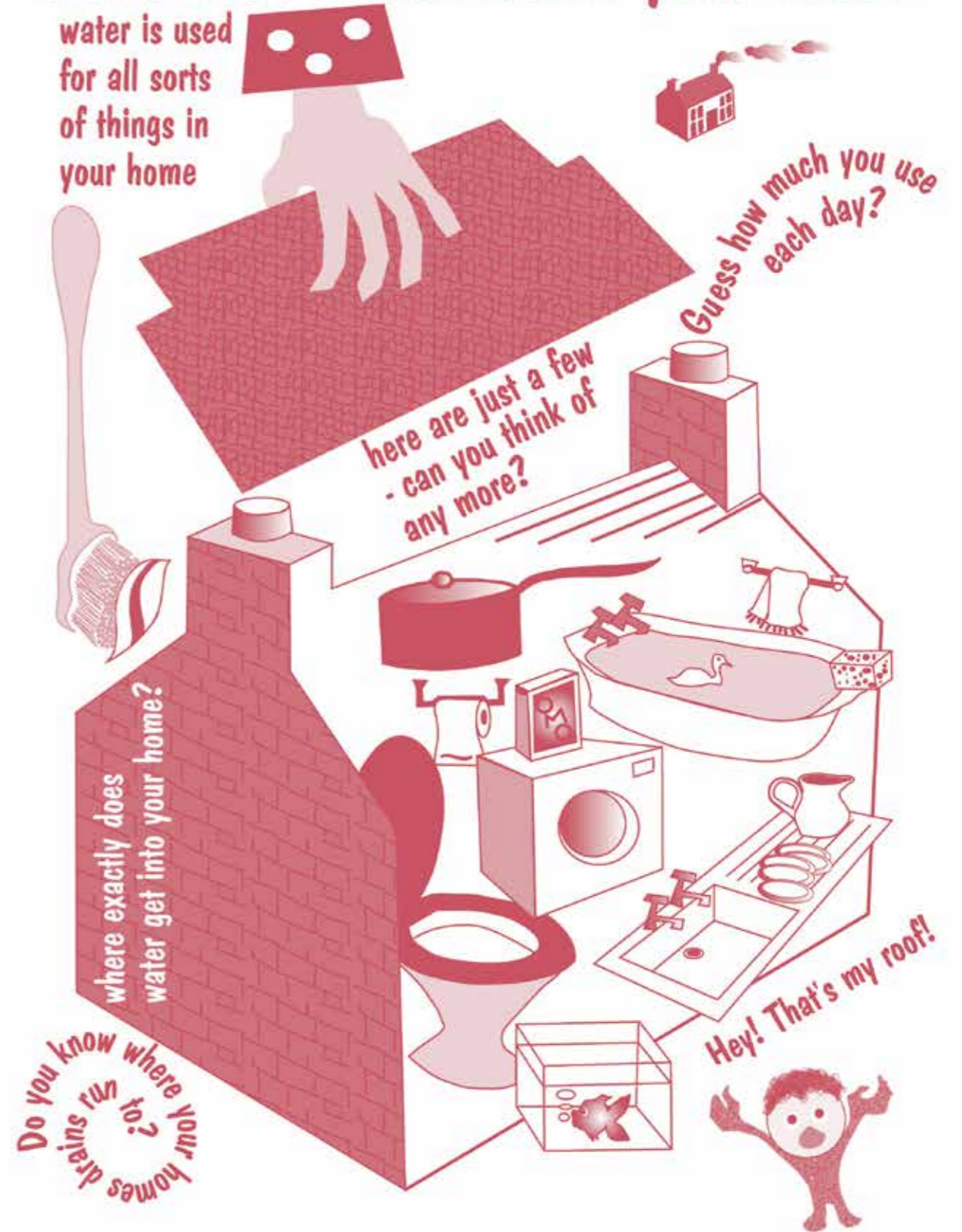


But there's a lot going on underground too...



Let's have a look inside your house

water is used for all sorts of things in your home



Septic Tanks (are great...if they work!)



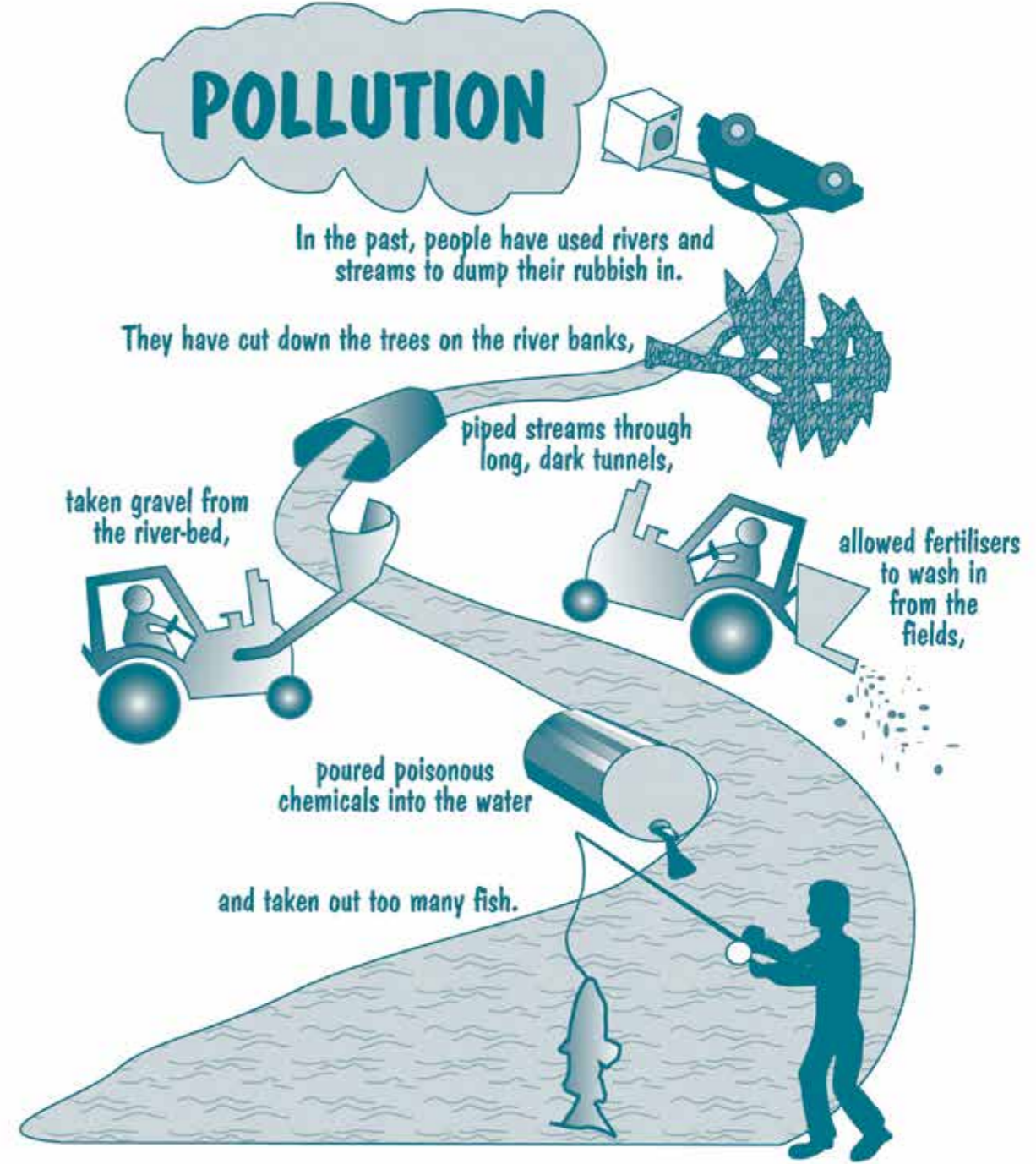
A healthy septic tank contains **MILLIONS** of bacteria. They live short but busy lives making more bacteria and eating everything which comes down the sewer-pipe from your house - yum!

When these bacteria die they are eaten too (by other sorts) and in this way human waste is gradually broken down and washed through the system.

BUT - the bacteria in your septic tank are sensitive little things and are killed by Bleaches, Toilet cleaners, Disinfectants etc.

POLLUTION

In the past, people have used rivers and streams to dump their rubbish in.



Not surprisingly, this has left lots of miserable smelly horrible-looking rivers!

BUT these days

everybody realises how important water is to all of us. If we respect our water systems then we can all have a happy healthy life in an interesting and exciting environment.

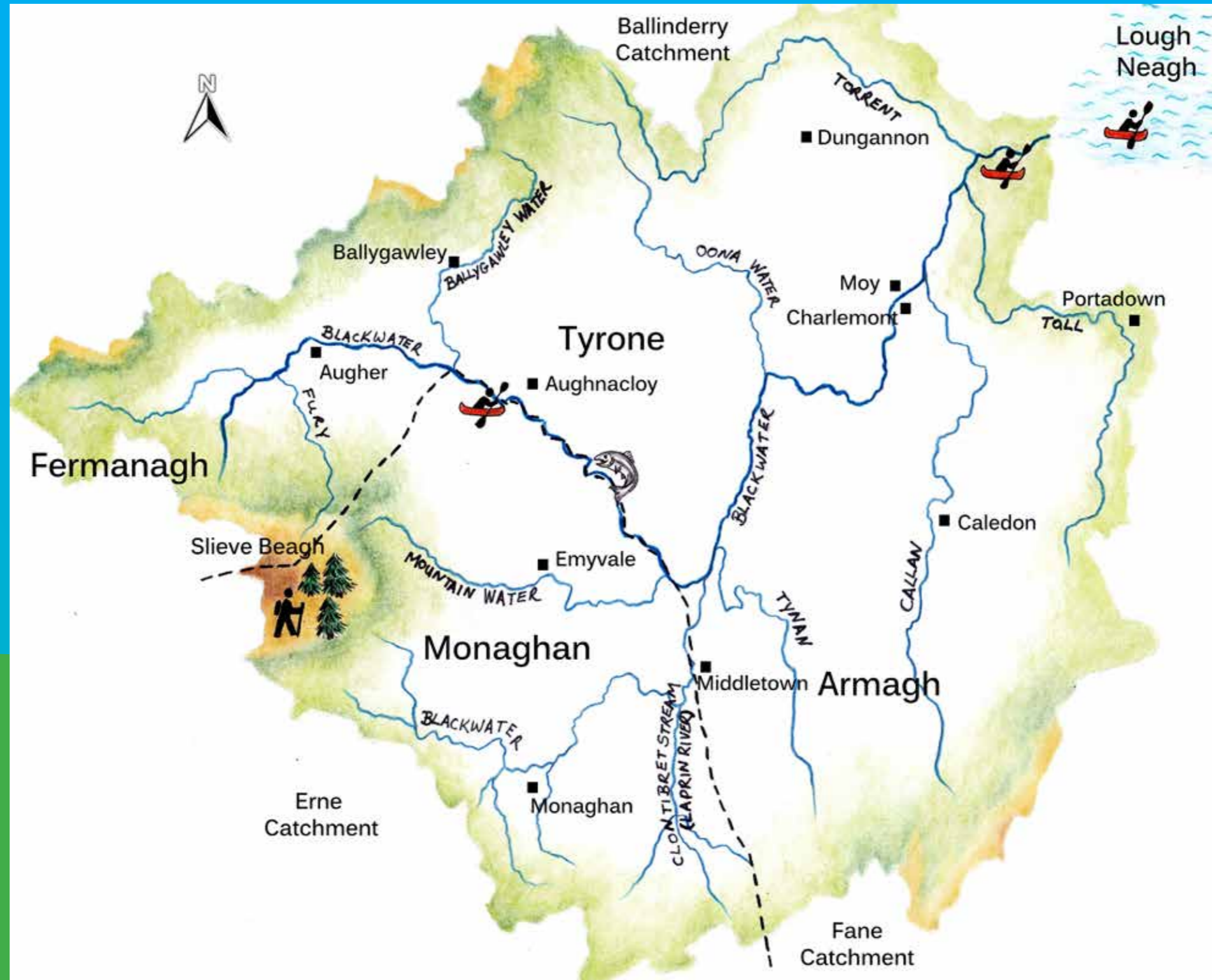
The River Blackwater Catchments

A Catchment is a Community related by Water!

What is a Catchment?

When you think of it, we all live in valleys, no matter how steep or broad, and all of our valleys have streams and rivers. From the hills above us to the sea below, these water courses make their way across our landscape and define the **Catchment** in which we live. Here a mountain stream runs swiftly and tumbles over waterfalls, there a wide river flows easily past green fields, through our communities and down to the sea.

In that river, along its banks and into the surrounding landscapes, may be found a wealth of **biodiversity**; fish, birds, insects, animals, trees, wild flowers, and people, but only if our waters run pure and clean. For our **Catchment** also contains our farms and factories, towns and toilets. We need all of these, but we must also come to understand how, as we work and play, or cook, and clean, and garden at home, we have a huge impact on water quality around us.



Chun ár gcuid abhantrach a bhainistiú ní mór dúinn glacadh le réimse leathan eolais agus an t-eolas úd a thuiscint – an leas a bhaintear as uisce, mar shampla ól, talmhaíocht, tionsclaíocht, níos chomh maith le tíreolas agus geolaíocht an cheantair. Caithfear féachaint ar an gceangal idir na coirp uisce ar fad atá faoi thalamh agus os a chionn, ar an sruth uisce báistí chun farraige, ar an leas a bhaintear as an dtalamh chomh maith le coirp uisce chun slí beatha a bhaint amach. Ní mór smaoineamh ar fhoinsí a chruthódh truailliú mar fhearais chóireála fuíolluisce uirbeach, dabhaigh mhúnlaigh agus taomadh ó fheirmeacha, foraoisí, dromchlaí crua, foirgníocht agus líonadh talún.

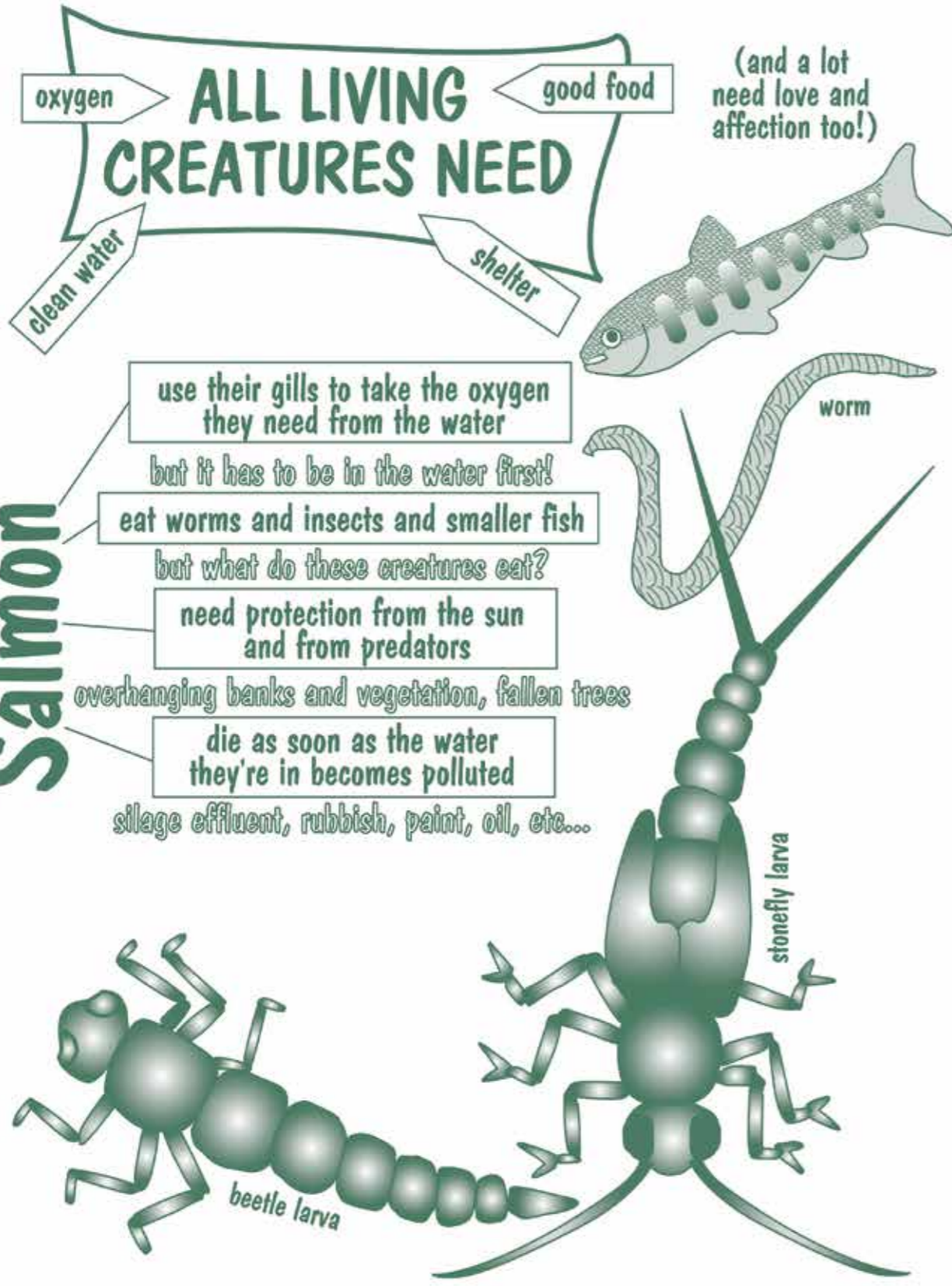
Le blianta beaga anuas tharla an-chuid dul chun cinn maidir le mórthruailliú a cheansú ach tá mórán fós le déanamh maidir le foinsí beaga truaillithe is iad scaipthe óna chéile. Ceist mhór fós is ea an díobháil fhisiciúil a dhéantar do bhealaí abhann. Is í aidhm an leabhráin seo ná eolas a scaipeadh ar an ról a bhíonn ag an bpobal maidir le cúrsaí nádúrtha uisce agus modhanna a mhíniú chun gur féidir linn ár dtionchar ar uiscí a laghdú. Táthar ag súil dá bharr go mbeidh breis eolais againn go léir ar na hábhair seo agus go mbeimid in ann suim a chothú san abhainn atá gar dúinn agus cur le chéile chun gnáthóga agus cáilíocht uisce aron a athnuachan.

The beautiful Ulster Blackwater includes many tributaries, all of which support vibrant communities as well as a wealth of biodiversity...if we can keep high-status water quality!!!

You may be interested in the activities of the Blackwater Rivers Trust...you can find out about their activities at www.blackwatercatchmenttrust.com

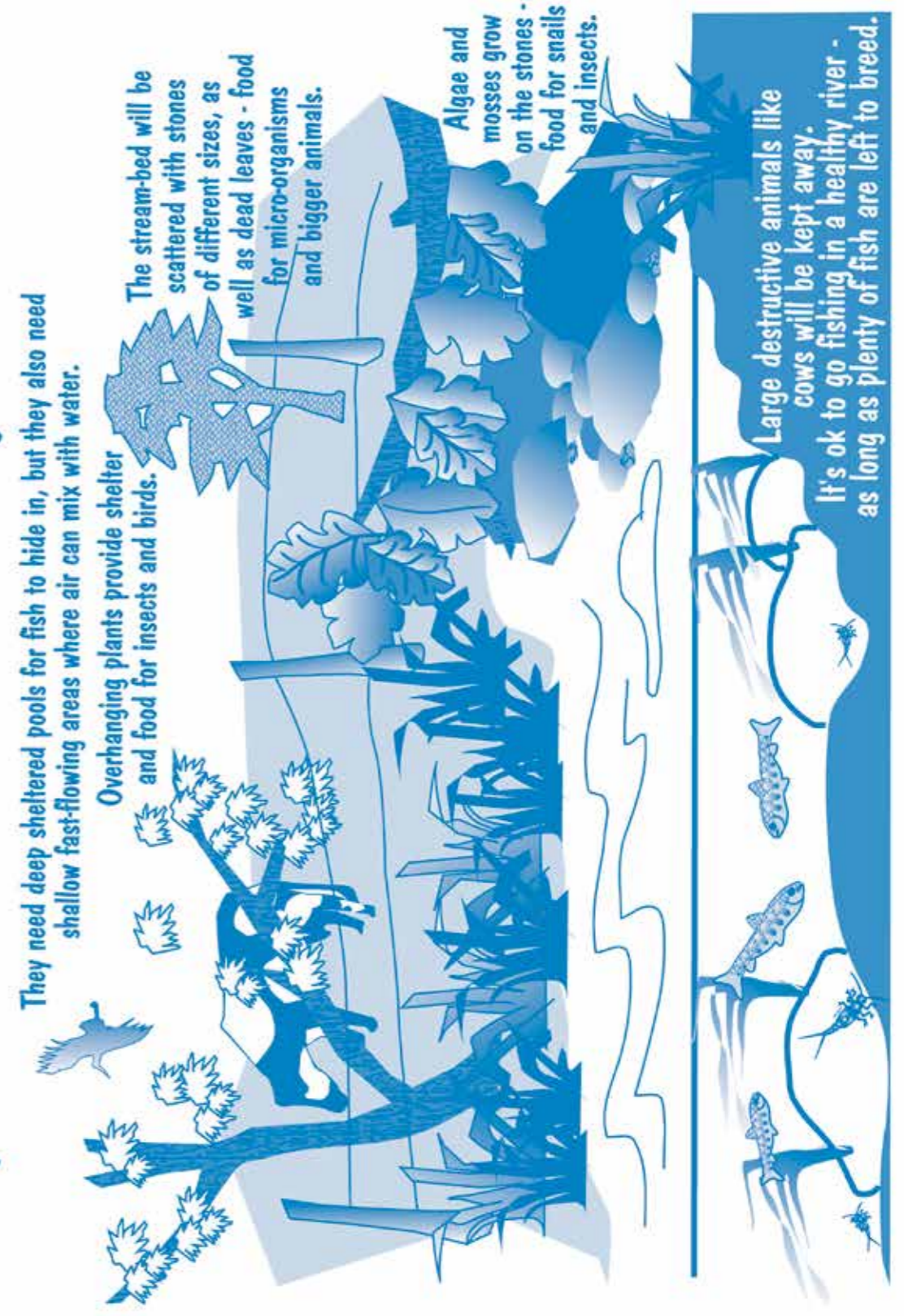
Also see www.blackwaterregion.com

Salmon



Healthy STREAMS and RIVERS

have a huge range of plants and animals living in and around them.

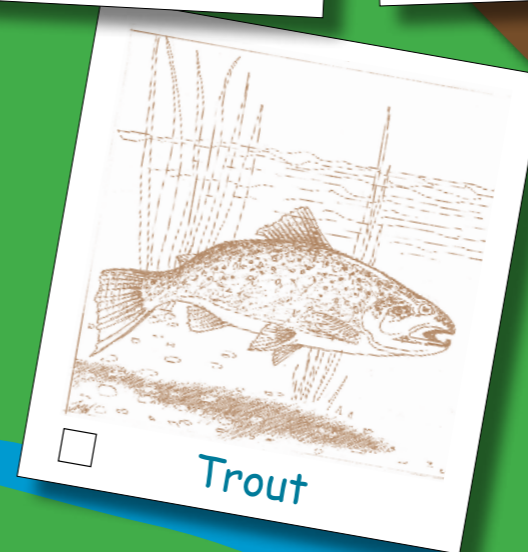
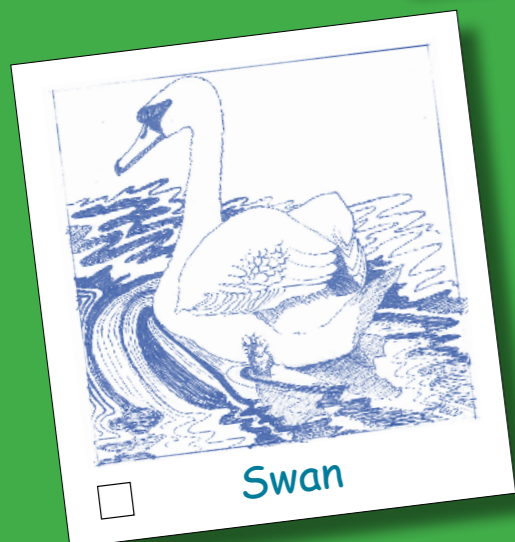
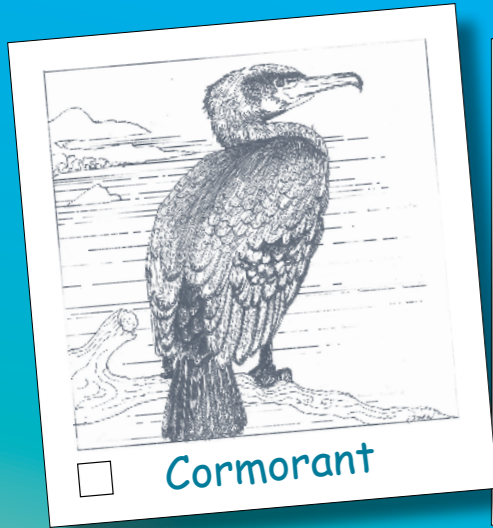


Our Wildlife

If we can achieve high-quality waters in our Catchment, lots of benefits follow. Following are drawings of a few examples of the variety of species which we might see in our River and along its banks.

How many species can you find?

Tick the boxes of any of the species below that you are lucky to see...
tell your friends and family!



Our Bugs

The Aquatic Insects that we find in our local stream can tell us what the water quality is on what is known as the 'Q Scale', so:

Q1 = Very Poor Q2 = Poor Q3 = Moderate Q4 = Good Q5 = Very Good

Q1 = Worms Q2 = Whirligig Beetle Q3 = Water Boatman/Caddis Q4 = Mayfly Q5 = Stonefly



Ulster Blackwater Catchment: Habitats & Species

In the southwest of County Tyrone within sight of the Fermanagh County bounds, the Ulster Blackwater rises from gentle rolling farmland north of Fivemiletown. From this source, to where it flows into Lough Neagh, the main Blackwater channel is approximately 85km in length and has a catchment area of 1,471km² (147,100ha) of which 105,974ha is in Counties Armagh and Tyrone, and 41,126ha in County Monaghan (Farm Census, Northern Ireland; and C.S.O., Republic of Ireland).

Gathering small tributaries as the river approaches the town of Clogher, it is then joined by the River Fury. The tree-lined river then flows north to Augher village from where it turns east to the Monaghan County bounds where, at the very northern tip of the county the Blackwater is joined by the Ballygawley Water, becoming ever broader as it collects further streams and tributaries. Many of these tributaries thread their way to the Blackwater between the drumlin hills of Monaghan and Tyrone, including the 'Mountain Water' and Monaghan Blackwater Rivers.

Here too in the middle reaches of the catchment lie important spawning habitats for Dollaghan trout, a strain unique to Lough Neagh. Generally speaking the salmonids (trout and salmon) favour the middle to upper (nutrient-poor) reaches of the Catchment while 'coarse' fish, such as bream, roach, rudd, pike, perch and true minnows, favour the (nutrient-rich) lower reaches. Of further note in the Ulster Blackwater are populations of Lamprey and white clawed crayfish, an internationally protected species.

Flowing on, about 2km west of the village of Tynan in County Armagh, the meandering river takes an abrupt northern turn and subsequently the Blackwater traces its way along the Tyrone and Armagh county bounds, though it still has some 40km more to broaden, widen and deepen on its way to Lough Neagh. In the vicinity of Blackwatertown, the surrounding landscape consists primarily of agricultural grassland, though some areas of tillage are also present as the lowland soil quality improves.

Here also woodlands, including plantations and woods of native origin, are dotted along the river bank. Downstream of Blackwatertown, the river is accessible to pleasure boats with the twin towns of Moy (Tyrone) and Charlemont (Armagh) providing pleasant stopping points along the way. On the approach to Lough Neagh the agricultural landscape changes as large swaths of land are used for harvesting peat from areas which once consisted of raised fens. At the village of Maghery, the River Blackwater enters Lough Neagh either side of Derrywarragh Island.

The Blackwater is one of six major rivers feeding into Lough Neagh, which is Ireland's largest lake at 392km², including the Rivers Maine, Six Mile Water, Upper Bann, Ballinderry and Moyola. The outflow of this majestic lake is the Lower Bann that flows north to the Atlantic at Portstewart. Lough Neagh is an important eel fishery and is also fished for salmon, brown trout, sea trout, Dollaghan trout, pike, and the unique Pollan. Lough Neagh has been designated as a 'Ramsar' site because of the very large numbers of wintering wildfowl.

For more information on the River Blackwater and additional educational materials for schools please visit www.blackwaterregion.com



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