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# River wild

ONE OF SCOTLAND'S MOST ICONIC RIVERS, THE TWEED IS A DEFINING FEATURE OF THE SCOTTISH BORDERS. BUT WHAT KIND OF HEALTH IS IT IN? MICHAEL ANTHONY FINDS OUT

**F**or a river that has long served as a lifeblood for the region, and marks the border between Scotland and England for 17 miles before emptying into the sea at Berwick, the actual source of the Tweed is a bit disappointing. You can't even see any water. Instead, there is a roadside sculpture that explains how the Tweed's Well seeps beneath the main road and emerges in the field opposite to begin its journey to the sea.

But the infant watercourse soon gets into its stride. Drawing energy from a massive catchment that sees water drain from the Tweedsmuir, Lammermuir, Moorfoot and Cheviot hills, it grows rapidly into a fully-fledged river that, at 97 miles in length, is the fourth longest in Scotland.

However, there is much more to the Tweed than just its main artery. Unusually for a major Scottish river, it is served by a capillary network of tributaries – many, important rivers in their own right – that together create a system that stretches to well over 3,000 miles in length.

And while the Tweed has been shaped by the hills that feed it, the river has in turn shaped the human history of the land through which it flows – a point highlighted by the many hill forts, abbeys, towns and monuments built along its banks. It has been a constant presence in a border area that has changed hands with alarming regularity down the

centuries, with the river no doubt running red from battle on more than one occasion.

In these more neighbourly times, however, the Tweed is known primarily as one of the most productive salmon rivers in Europe and is a place of pilgrimage for fly-fishers from around the world. It is also of vital importance to the Borders. Salmon fishing alone contributes around £18 million to the local economy and supports more than 500 jobs locally.

## RIVER MANAGEMENT

The location of the river, with its source in Scotland but an estuary and lower part of its course in England, complicates matters when it comes to managing fish stocks. Fortunately there is a long history of fishing interests on

both sides of the border adopting a collaborative and consensual approach that has benefited the entire Tweed catchment.

Most recently, this has seen Government agencies, fisheries experts, angling clubs, conservation bodies, local councils and landowners come together under the auspices of the Tweed Forum, a group that acts as a coordination point for all those with an interest in the Tweed. "It was always an ambition of the membership to have a coordinated management plan for the river," explains Luke Comins, a landscape ecologist and Manager of the Tweed Forum. "The river is cross-border so there is twice the bureaucracy with lots of different regulatory bodies involved. However, we are there to streamline planning and get things done on the ground."

And get things done it certainly has. Aided by a multi-million pound injection of funding, largely from the Heritage Lottery, and armed with the detailed scientific knowledge of fisheries biologists at the Tweed Foundation, members of the Forum have spent the past decade restoring and promoting not just the ecology of the river but also the cultural and built heritage of the Tweed.

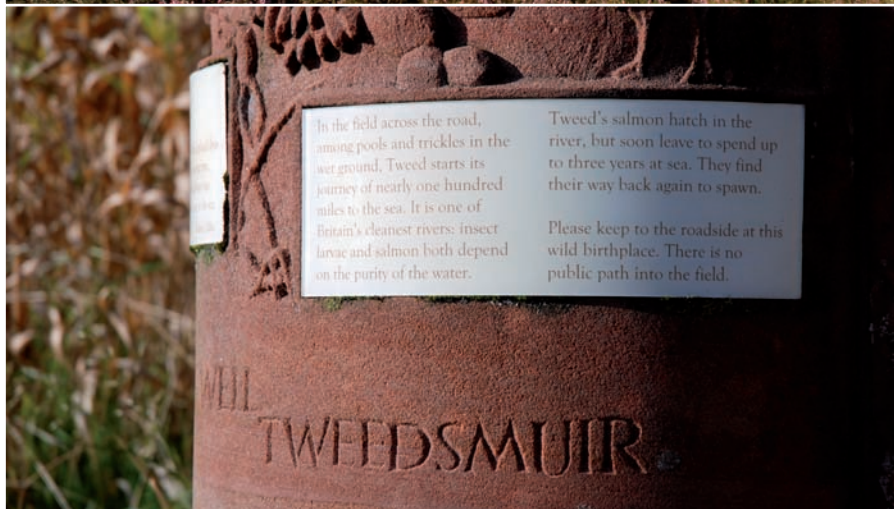
With so many Borders settlements having grown up alongside the river, there are listed buildings and monuments that not even locals know exist. A lot of the Forum's work has involved unearthing these sites and providing access to them. "The heritage is here, it's just a matter of helping people find it," says Comins.

Likewise, efforts have been made to reconnect local people with the river, developing recreation opportunities such as walking and mountain biking trails, canoeing and kayaking on the river, plus a variety of nature-based tourism initiatives that themselves hint at a river ecosystem that is in good shape. Ospreys have returned to the Tweed catchment, with viewing facilities developed at Glentress and Kailzie Gardens, while the Philiphaugh salmon viewing centre near Selkirk provides a chance to learn about the incredible life-cycle of salmon.

"Philiphaugh is an excellent interpretation centre and gives a glimpse into the huge migration that goes on in the Tweed," says Comins. "It's right up there with the

Picture perfect: Scott's View near Melrose





In the beginning: the source of the Tweed (above); walkers on the John Buchan Way (top); classic upper Tweed views (above middle); satisfied customers (opposite); canoe adventures on the River Till (below)

journeys of the wildebeest in Africa or the Arctic tern."

But if salmon are to complete their complex life-cycles, it is vital that they access the furthest reaches of the river system. In the past, this was not always possible. The textile industry that once dominated the economic landscape in the Borders harnessed the Tweed to power its mills, building caulds (weirs) and dams that effectively closed off large sections of the river, preventing fish from reaching their spawning grounds.

Over the past decade, the Tweed Foundation has removed most of these obstacles, or at least made them navigable via fish ladders and passes, and migratory fish now have access to

more than 500 miles of Tweed catchment for the first time in 200 years. Monitoring confirms that the fish have done the rest, readily re-colonising newly available areas.

With a lot of pollution associated with the mills, the water quality of the river has also improved immeasurably since the heyday of the textile industry. "In the mid-19<sup>th</sup> century, Ruskin wrote of how the Teviot [a major tributary] 'oozed to the estuary' rather than flowed, but it's a lot better now," notes Comins.

Today, the main water quality issues are found in the lower reaches of the Tweed where nutrient inputs associated with more intensive arable and livestock farming still generate diffuse (run-off) pollution. The solution has been to introduce buffer strips and wetland filtration systems that help cleanse dirty water flowing into the river system.

Problems do remain, but the importance of the fishery resource on the Tweed – and the habitat on which the fish rely – has hit home, with private landowners, forestry and farming interests now largely onboard in terms of reducing harmful run-off. "Rivers are just a function of the land, so landowners must be involved," says Comins. "On the whole, people are much better informed of the consequences of their actions, while legislation has also tightened its grip."

Crucially, the river has not just been opened up, but the habitat has also been greatly improved, particularly in upper catchment burns that serve as the powerhouses of the whole river system. It is here, high in the headwaters, where salmon and trout spawn, and juveniles live for their first few years.







As regular walkers in the area will know, the rounded hills of the Southern Uplands are largely bare, with the closely-cropped turf a legacy of heavy grazing. Unfortunately, this spells bad news for the river as short turf has shallower roots, which means the ground is less able to resist the erosive effects of trampling hooves or violent spates. What this means is that instead of having fish-friendly streams full of deep pools and natural vegetation cover, the stream banks tend to collapse more readily leading to wider, shallower streams that offer poor habitat for juvenile fish.

One solution has been to exclude livestock from river banks through fencing, particularly on tributaries such as the Ettrick and Yarrow

## “IF YOU OPEN THE RIVER UP, THE FISH WILL FIND A WAY BACK”

that are known to have fragile stocks of early running salmon. In some places, the river margin habitat has been supplemented by additional planting of native trees and shrubs. “If you fence off and then plant up these areas, the burns narrow again,” says Comins. “The vegetation then attracts invertebrates that are an important food for the fish.”

### FLOURISHING FISH

The net result of all this attention is that fish are now flourishing throughout much of the river system – good news for the more than 20 angling clubs on the river. “In most areas there are great stocks of fry and juvenile fish,

which tells us there is good spawning and breeding,” reports Nick Yonge, Director of the Tweed Foundation.

Unlike many major rivers in the UK, the policy here is not to stock wild fish anywhere in the system but instead promote a self-sustaining fishery. “We believe that the fish will do fine if you just leave them to it,” says Yonge. “If there is a problem we look at it, but usually it is not about the fish but the place in which they live.”

It is a belief shared by Fin Wilson, who runs Fishwild, a guiding service that leases a three-mile beat from the Dawyck Estate on the upper reaches of the Tweed. “The Tweed Foundation has done a fantastic job of getting the river back to good health and the fish have done the rest,” he says. “If you open the river up, they’ll find a way back.”

One of the particular draws of the Tweed for anglers is its mix of quarry. Many come for the salmon, of course, but the Tweed is increasingly known for first-class wild brown trout and grayling – a species first introduced for winter fishing and once considered vermin, but which is now highly prized.

“I would say without hesitation that the Tweed is one of the best grayling rivers in Europe,” notes Wilson. “The Italians are very big on grayling fishing and I’ve had guys here who can’t believe the size of our fish.”

And salmon fishers have been pretty happy too, with catches increasing steadily in recent seasons to around 16,000 salmon. Such a

prolific number is in part because of the long season on the Tweed – trout are caught from April to October and salmon from February to the end of November – but also because of the care taken to manage fish stocks. “We look after them,” notes Yonge simply.

There are distinct components within the season, with the spring salmon run much lighter than in the autumn. However, it hasn’t always been that way. “The spring and autumn runs have flipped over the last 50 years,” says Yonge. “We don’t know what triggered it, but assume it will flip back again at some point.”

With the fish running in smaller numbers in spring, the Tweed Foundation has initiated a voluntary catch and release programme that Yonge says sees around two-thirds of those caught returned to the river. “It is important to have this special protocol for the early fish. We absolutely want people to keep fishing, but it has to be sustainable.”

Of course there is never room for complacency with a species so susceptible to change as migratory fish – a point illustrated recently by grumbles about a fall in salmon numbers during the recent autumn run. “The fact that numbers are down this year is almost certainly to do with something out at sea,” believes Yonge.

Another key question surrounds just what climate change might mean in future – not just for the fish, but also the people who live around the river. With many sections of the Tweed subject to severe flood warnings at the time of writing, what is clear is that flood management is likely to become an ever more important issue, with the onus on





## Essentials

### TWEED FORUM

An umbrella group that works to conserve and promote the natural, built and cultural heritage associated with the Tweed. [www.tweedforum.com](http://www.tweedforum.com)

### TWEED FOUNDATION

A charitable trust involved in an extensive programme of biological research, monitoring and habitat enhancement throughout the Tweed river system. [www.tweedfoundation.org.uk](http://www.tweedfoundation.org.uk)

### PHILPHAUGH SALMON VIEWING CENTRE

Learn all about the life-cycle of salmon at this fantastic interpretation centre – and see salmon leaping up the cauld on the Ettrick (May to June, September to November). [www.salmonviewingcentre.com](http://www.salmonviewingcentre.com)

### FISH TWEED

For all you need to know about fishing the Tweed and its tributaries. [www.fishtweed.co.uk](http://www.fishtweed.co.uk)

### ACTIVE FOUR SEASONS

Northumberland-based activity operator that offers guided canoe journeys on the Tweed and elsewhere. [www.active4seasons.co.uk](http://www.active4seasons.co.uk)



increasing what Comins describes as “the landscape’s resilience to extreme events”.

The potential long-term threat of climate change is reason enough to look beyond the obvious solution of building walls around areas at risk and instead explore more natural flood management solutions. Although still a relatively poorly understood field, natural solutions such as planting and creating wetlands to slow the movement of run-off and increase storage have been shown to help flatten out the spiky rises and falls in water levels that follow heavy rainfall.

“Another good point about natural flood management is that it involves habitat restoration that helps in other areas, be it fisheries, birds, soil conservation, water quality, or carbon storage,” says Comins.

The Forum has several experimental projects in natural flood management underway, including a wetland restoration effort in

Jump to it: salmon in full flight (above, top); wetland restoration (above); Niedpath Castle sits above the Tweed near Peebles (above right)

scheme sees the breaching of selected flood defences along the Milfield Plain to allow water to flow across the natural flood plain as it would have done in the past.

This has not only created ideal habitat for wading birds but, during recent flooding on the Till, resulted in areas where flood banks had been removed incurring far less damage than where they had been left intact. “This is because in areas where there were flood banks, the water couldn’t get away again so the crops just rotted in all the standing water,” explains Comins. “It was quite enlightening.”

Northumberland that is working with farmers and land managers to re-connect the River Till with its natural flood plain. The voluntary

Elsewhere, the Forum is working with landowners to restore flood plain woodland, block drainage ditches and generally look at the way water flows across the landscape. “In the past, it was about getting water off the land as quickly as possible using ditches, but if everyone does that you get massive flood peaks.”

It is all part of the complex process of understanding and conserving a river system that, although not perfect, is nonetheless in far better condition than it has been for a couple of centuries. The Tweed has been restored into a living, breathing entity where the flash of a kingfisher or the splash of a large salmon are seen by the many more people who now enjoy the river.

“The Tweed is a great asset,” says Comins. “It may not be as wild as some of the northern Scottish rivers but it defines the area and binds the region together.” ■