



# A GOOD PLACE TO GROW UP

*Paul Gaskell*, of the Wild Trout Trust, explains the importance of providing a “rough” nursery habitat for young trout – and how quickly life in a stream can be regenerated

**I**N TROUT biology, it is expected that much mortality will happen between eggs hatching and fish finally getting old enough to choose mates of their own. Typically, more than 90 per cent of the fish that hatch will perish before they get the chance to pass on their genes.

However, because of the large numbers involved (typically around 1,500 eggs in a 2 lb female), even small shifts in death rate (say a change from 97 per cent mortality to 92 per cent mortality) can have a huge impact on the number of adult fish in your stream.

The critical times are immediately after fry

emerge from the spawning gravels and whether parr and older fish successfully overwinter. Fortunately, the habitat required for both periods is similar and relies on the presence of brash – coarse woody debris – in the margins of the stream. The typical range of desirable conditions could be broadly characterised as follows:

Fry (the short transitional stage immediately after emerging from gravel, when they start to feed for themselves and disperse) need shallow water between 10 cm and 30 cm deep and a water velocity of between 0 cm and 30 cm per second.



Flag iris beds (left of frame) are deliberately sited adjacent to spawning redds (the clean gravel mounds easily visible between the weedbeds). These plants provide cover for emergent fry.

Parr (young fish after the yolk sac is fully absorbed and up to one year old) need a water depth of between 10 cm and 60 cm and a water velocity of 5 cm-50 cm per second.

Adults (fish at least one year old and capable of reproduction) need water generally deeper than 30 cm and a water velocity of 10 cm-60 cm per second.

In addition to the above, all developmental stages require marginal fringing vegetative shelter and brashy cover, including tree roots (don't cut them back on working parties), hinged bankside shrubs and trees and, perhaps, deliberately installed tree "kickers" to shelter parr or adults from predation and the fiercest currents. In lower-energy streams root masses of emergent plants such as flag iris can also be excellent for newly emerged fry. For the best effect of all (*ie* the greatest conversion of hatched fry to adult fish), you must ensure that dense brash is present right next to your spawning habitat and also available in the slower-pool habitat favoured by trout waiting out the cold winter months.

This kind of habitat is also probably the best defence against influxes of fish-eating birds, such as cormorants and goosanders.

It is also worth noting that, in order for

article is concerned, these brash revetments provide fantastic shelter for juvenile (and adult) fish from predators and are a haven during raging spate flows that can wash young fish towards the sea.

Here's how this previously almost fishless section welcomed angler Mick Martin in September 2009 following a springtime installation of brashy cover (excerpt taken from Mick's online fishing diary [derbyshireonthefly.blogspot.com](http://derbyshireonthefly.blogspot.com)):

"Today I went to explore more of the Manifold, starting at Ludburn where Derby County Angling Club has donated a section to the Peak Passport Scheme. I walked downstream, staying well clear of the bank because with a river this size you could lose the battle before it starts if you hang your nose over the bank on the way downstream before fishing back up – resist the temptation.

"I chose my starting point and sneaked into the river where there was a good stretch of juvenile habitat lined up one side to reclaim the bank. I cast next to the brash and got walloped instantly.

"This restoration work had definitely done the business, providing a safe environment for young trout. The pool was alive with them,

## "Brash revetments are a haven during the raging spate flows that can

re-vegetation to occur, and to avoid banks cutting away behind installed brash, the exclusion of grazing stock for the majority of the year is required.

THE ACTOR Dean Andrews, of *Ashes to Ashes* fame, is a keen trout-fisher and whenever he catches a little fish he says, "One of next year's monsters" – and there's much to be said for that line of thought. Consider a stretch of the River Manifold in Derbyshire. It was largely devoid of fish, according to electro-fishing surveys and the experiences of anglers.

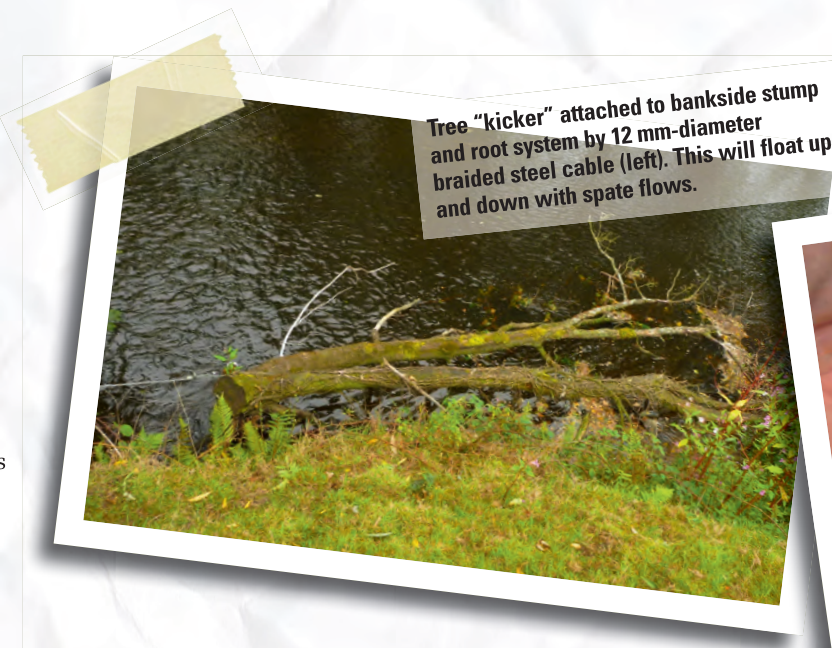
Then, as part of erosion control works being carried out by Trent Rivers Trust and Andy Heath, in partnership with the Wild Trout Trust, large amounts of marginal brashy materials were installed.

Not only do these directly reinforce the butter-soft bank, they also "brake" and calm the raging spate flows in the margins (unlike hard stone or gabion reinforcements, which just "bounce" the flows off to erode soft banks further downstream). This braking effect tends to promote deposition of silt and re-vegetation of the margins. Additional habitat for invertebrates that make up the trout's diet is also created, and dense brash provides a cooling effect to protect against the baking temperatures of the dog days of summer.

Finally, and most appropriately so far as this



Hinged shrubs and trees (foreground, near bank) and background (far bank). Excellent fry and parr shelter produced by the Monnow Fisheries Association.



Tree "kicker" attached to bankside stump and root system by 12 mm-diameter braided steel cable (left). This will float up and down with spate flows.



A beautiful baby brownie from the Manifold – a safe environment for vulnerable young fish is paramount.



"Brash" (woody debris) provides bankside cover for fry, parr and adult trout alike.



This "Derbyshire gladiator" of a Manifold brown trout gave Mick Martin a stirring battle.

providing me with six perfect little fish, amazingly beautiful little things.

"I quickly became engrossed with the river and once in top gear I began connecting with most takes, resulting in lots of browns, and they were getting bigger. I had all my success on Elk Hair and Larry's Pride but I should mention that once you're under the canopy, you can't help but lose one or two flies to the tree gods.

It was nothing short of fantastic dry-fly action and I intend to congratulate Andy from Trent Rivers Trust and Ron Trevis from DCAC

## wash young fish towards the sea"

for their successful work to date. The future of the Manifold looks very promising if this Passport section is anything to go by and this stretch will be excellent value day-ticket water. Just to finish the day off nicely I noticed otter tracks as I walked back downstream – I was being stalked, methinks."

SO MUCH for next year's monsters: how do you fancy next week's monster? Mick recorded the following blog entry for a section of the Manifold on October 4 (just before the end of the local trout season):

"Today I got the shock of my fishing career when, after catching plenty of fish – small, medium and a couple of lunkers – I got a savage pull from an old Derbyshire gladiator. Instantly I knew this wasn't within the usual realms of small-stream fishing; well, not mine anyway. I was amazed at the first run this trout made, shooting upstream like a torpedo.

"I began to strip line off my reel, knowing there was no holding this brute, not with my Old Majestic bamboo rod and 2 lb cast. If I were to win this battle I knew I'd need to draw on all my skill, experience and then some.

"My arms began to ache and I steadily applied a little more pressure on the rod and tippet, turning him around after every run, only to be pulled downstream again by what felt like a large German Shepherd on the other end. Eventually, as he tired, I knew that he was mine. I had a job scooping this 22 in long, 14 in girth specimen into my pan net. I unhooked him and took a few shots, lowering him slowly back to the river for a well-earned rest. The picture (top of this page) shows his huge shoulders, a bit like George Foreman's."

(Note: Mick has large hands.)

I don't really need to add anything to that, do I?

● Paul Gaskell works for the Wild Trout Trust where he manages the Trout in the Town programme.

### Factfile

The Wild Trout Trust is always available to offer free advice on creating parr, spawning and adult habitat in your stream. Contact them via their website at [www.wildtrout.org](http://www.wildtrout.org) or call 023 9257 0985.

