



**Wessex
Chalk Stream
& Rivers Trust**

Newsletter - Spring 2012

Directors Update:

I believe we have made steady progress since the launch of the Trust, in June 2010, despite significant resource constraints. We have worked hard to establish our position in the regional arena as the representative for riparian stakeholders and river habitat interests, with the government environmental agencies and non-government groups. Although the bottom of an economic downturn has certainly not been the easiest time to launch a new charity from a financial perspective, the coincidence with the new government and its 'big society' aspirations has provided us with significant opportunities to help deliver on-the-ground improvements to our rivers and catchments and to build a stronger involvement in decision making. Our relationship with riparian owners has been an important key to this

A seemingly relentless tide of consultation and stakeholder engagement has kept us busy with matters such as government white papers on environment and on water, development of guidelines for hydropower at a national level and: River Basin Management Plans, salmon action plans, diffuse water pollution plans, strategic restoration plans at a more local level. We have reviewed and

commented on eight applications for hydropower generation taking the stance that we support the principle of renewable energy but not where this results in unacceptable impacts on river habitats and fish, including when the facilities are no longer operating.



Tom Davis

We have been proactive with our involvement with scientific research, with a firm emphasis on informing practical river and catchment management. The first stage of our Ranunculus programme has been completed. It identifies areas for closer focus in subsequent stages,

particularly in relation to river management and cutting. We are co-funding an exciting three year research project at Southampton University looking into phosphates in our chalk headwaters. The aim is to identify where efforts should be targeted to reduce effects of excessive nutrient levels which we believe are damaging the health and function of the river ecosystem and promoting excessive algal growth. Monitoring of river temperatures which was begun by the Wessex Salmon Rivers Trust has continued and been extended to other catchments. This will provide valuable data to assist in understanding the scope for ameliorating the effects of climate change. We have developed a novel research proposal to explore the potential for manipulation and enhancement of natural self-cleaning processes in chalk rivers which trap and remove nutrients and suspended solids from the water column, while at the same time addressing loss of fly life and valuable river plants. We are actively seeking funding for this. If you or anyone you know would like to know more about it, please get in contact.

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Directors Update: Continued...

Our educational programme has continued building on the Trout in Schools programme established under the Wessex Salmon Rivers Trust. Two new locations were added to the 11 which have so far participated in the scheme and in some cases use of the tank facilities has been extended to study invertebrates and other small fish species. Expansion of the scheme eastwards has been constrained by a shortage of volunteer help. An online resource on chalk streams is being developed in conjunction with the Wiltshire Wildlife Trust.



Photo: John Levell

As I write we are examining potential projects for submission for financing through the Catchment Restoration Fund scheme, focusing on delivery of Water Framework Directive requirements. Projects likely to be put forward include fish passage improvements, habitat restoration and addressing diffuse pollution. Strategic restoration plans are well under way for the SSSI rivers. The Trust has been represented by myself and Jon Bass on the steering group for the River Avon which has now started the implementation phase. A directory of restoration

proposals has been compiled, identifying, amongst others, those projects earmarked for EA funding. If you would like a copy please contact us. The strategic restoration plan for the Test and Itchen is at an earlier stage of development.

Capacity constraints meant that we were not able to pursue the three projects allocated funding under phase 1 of the River Improvement Fund to completion, and they have been deferred. We plan to recruit a projects manager/coordinator shortly, with funding through a collaborative agreement with the EA. This will give be a significant step in building our capacity to take on and implement project work across the region, taking advantage of government funding aimed at delivering Water Framework Directive and similar requirements.

An investigative salmon stocking project was initiated in December 2010 on the Avon with the aim of releasing hatchery reared fry from wild salmon eggs to test their survival in what appear to be good habitat reaches but currently reveal poor juvenile salmon numbers in EA fish surveys: the key question being where the natural bottleneck is occurring. Eggs from three salmon were

successfully fertilized and incubated but the resulting fry failed to feed properly and died. A repeat attempt is planned next year.

We are in the final stages of negotiation of a buy-out of the last remaining salmon and sea trout nets on Christchurch Harbour which will have important implications for the success of those two species in both the Avon and Stour catchments. We are extremely grateful for the cooperation we have enjoyed from the netsmen and from those who have assisted us with funding and other-

wise negotiating this agreement. We are aiming to conclude this by the end of March. This will mean that there is no longer any legal netting of salmon or sea trout on any of our region's rivers.

Sadly, Brian Marshall who has been a key figure in the development of this Trust decided to stand down as Chairman in the summer, reminding us that he only intended to serve on a caretaker basis. We are extremely grateful to him for his valuable contribution, and not least his tireless efforts to save the Avon salmon. He has agreed to continue to assist and advise on salmon matters. We have identified a new chairman who we hope will take up the reins in late March. More on this once we have confirmation.

Malcolm Crabtree and Peter Hayes have also announced their retirement as Trustees. Their wise council, imaginative input and encouragement has been invaluable in the early stages of the Trust. Clay Brendish, Chairman of the Test and Itchen Association has offered to stand as Trustee and we hope to recruit someone from the Wiltshire Fishery Association shortly.

Looking to the immediate future I believe our key priorities are:

- 1) Fundraising and building our income base to a sufficient and sustained level to support a small professional staff.
- 2) Ensuring that proper protection is given to our precious rivers through this period of unprecedented drought and ensuring that adequate institutional precautions are put in place to protect against the effects of low flows in the longer term.
- 3) Delivery of project work
- 4) Building capacity in all areas of our activity through recruitment of volunteers, but particularly to help with our education, fundraising and publicity activities.

Thank you for your ongoing support for the Trust.

Tom Davis, Director



Words: Malcolm Anderson

Many of us will have seen the recent press coverage of drought summits on the news or read newspaper columnists discussing the potentially serious drought conditions that the summer of 2012 may bring us.

Those of us locally who see the River Kennet running dry, the Tilshead observation borehole sitting empty and the River Wylde running at 25% of its long term average in February could be forgiven for being confused by the national maps provided by the Environment Agency (EA). These show large parts of the Wessex Chalk Streams and Rivers Trust catchment being at 'moderate risk' of drought.

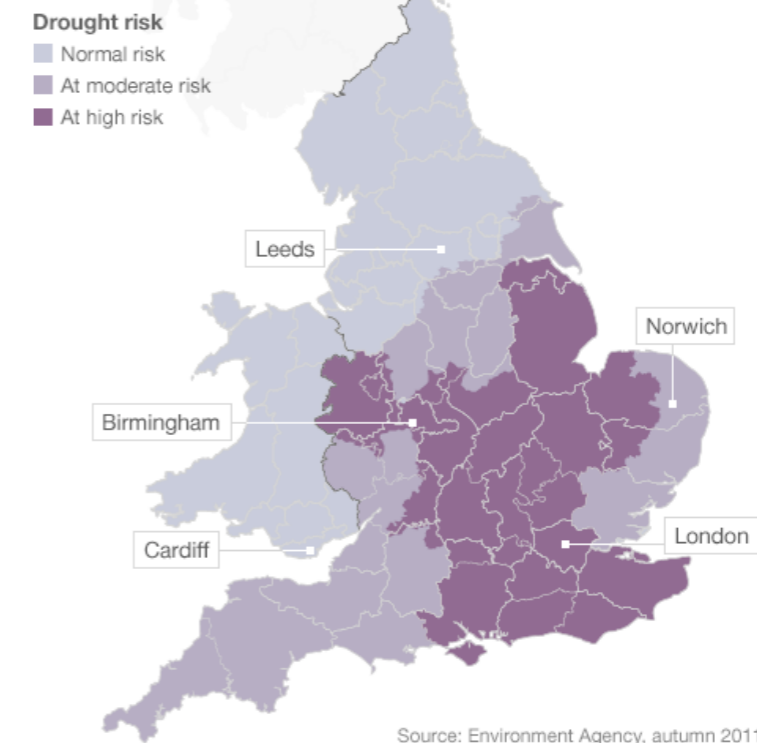
There are a few things at play here and as they're not immediately obvious I will endeavor to explain how our rivers can be running dry and yet the EA classify us as only being at moderate risk.

As of February 2012, Lincolnshire, Cambridgeshire, parts of Bedfordshire and Northamptonshire, and west Norfolk, Hampshire, West Sussex, East Sussex, Kent, Surrey, London, Berkshire, Hertfordshire, Buckinghamshire, Oxfordshire, and the east of Gloucestershire are classified as being in drought. So how can Wiltshire with empty boreholes and rivers showing their bones not be in drought?

A part of the answer lies in the

way that the EA boundaries are set up. The WCSRT lobbied for the EA boundaries to reflect the chalk streams and rivers as a defined area given their unique geology and habitat. Unfortunately however, the chalk watercourses remain split across two EA regions. As a

Drought risk areas in England and Wales, winter 2011/12



Source: Environment Agency, autumn 2011

result, the local picture in South West Wiltshire is not reflected properly in the statistical bulking up of the whole county.

Another problem is that large quantities of water are taken out of catchment by water companies. This is clearly evident on rivers such as the Till and Wylde in that much of the water abstracted from the Chitterne Borehole is piped away from South West Wiltshire to Bath and Taunton where it is used and flushed down toilets and sinks, treated and discharged into the

river Tone and Bristol Avon catchments. Our clear aquifer water, with its very low nitrogen content is like proverbial gold dust to water companies. It's cheaper to take our water and pump it 40 or 50 miles and then mix it with local water to reduce nitrogen content than it is to clean those local sources.

Another complication for our chalk watercourses is that due to the water being taken out of catchment, for a drought order to work effectively it would have to not only apply locally close to the rivers but also in the towns and cities where our water is being pumped. Politically this is a much tougher fight.

One last issue, as if there aren't enough already, is that there are two classifications of a drought. A water resource drought (where there isn't enough water for people to drink, flush down toilets and use in agriculture/

commerce) and an environmental drought (a situation where the natural environment is adversely affected by lack of water).

Our local drought plans are set up to respond to water resource drought and all but ignore the problems of environmental drought conditions. I firmly believe that this is not right, and that there should be defined environmental triggers for drought plans, not just financial driven water resource triggers.

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TROUT in schools

Words: Pete Reading

It was in late 2005 that the Trout in Schools project was first envisioned, and trialled at Ringwood School, Hampshire where, as Head of Science Faculty, I was soon to find myself in charge of hundreds of little trout as well as my other duties. I well remember being fairly reluctantly persuaded to try out a hatchery in the classroom, but after some cajoling and encouragement by Michael Twitchen, agreed. It was hard to see how such apparently delicate little specks of life could survive in a tank in a classroom and eventually become little fish, but Michael and Keith Elson, full of enthusiasm and confident with experience, assured me that there would be a high chance of success.

small alevins broke their way out, with the surface of the tank becoming covered in a strange froth, as enzyme activity and broken egg cases combined.

Those first fish were raised to the fry stage with a remarkably high



Photo: Trout in Schools

tailed and two headed mutations never survived for long, but added some extra interest for a while.

Children, staff and visitors are entranced by the sight of both the developing eggs, the growing alevins, and the little trout as they feed and grow.

The release of the fish is an opportunity to take students to the river bank in order to say goodbye to their little trout, and on one occasion at Ibsley we had film cameras from local television to record the event.

The latest school to be involved in the project, Wimborne First School, had a particularly successful experience, and after raising the trout with remarkable survival rates, Hugh was on hand again to film the release of the trout

into the nearby River Allen.

It was a real pleasure to see the commitment of staff, students and parents to the project, and I will not forget being ushered into the hall by the Headteacher to give an impromptu assembly to the children!

survival rate, with the inevitable removal of white dead eggs and the occasional dead fish reinforcing the reality of survival of the fittest. Teams of children joined rotas to Hoover up the waste food, debris and odd casualty, and to feed the fry as they gradually turned from alevins to tiny, greedy fry. The two

After a few days, the slightly opaque pink eggs turned a brilliantly clear, bright orange, and the tiny embryos could be seen twitching eagerly inside. The change in colour of the eggs, from a dull misty pink to a clear, bright orange, is a prelude to hatching, and soon the



TROUT in schools - continued

Our grateful thanks must go to Tesco Stores, who have funded the project in the past, and to Trafalgar Fisheries, who have always most generously provided the eggs for us.

Our thanks also to local Environment Agency officers who have been very helpful and supportive. Thanks also to both Michael Twitchen, and the late and sadly missed Keith Elson, who steered me in the right direction.

Thanks also to Adrian Simmons of Wilton Fly Fishing Club, who has supported the project at Great Wishford, and Martin Gilchrist of Natural England, who gave a great deal of his time and some Living Rivers Project funding.

Schools and institutions that have been part of the project to date include;

- Ringwood School
- Burgate School
- The Grange School, Christchurch
- Priestlands School
- Applemore College
- Great Wishford Primary School
- Sarum St Pauls Primary School
- Langford Study Centre
- Salisbury Library
- River Bourne Community Farm, Salisbury
- Wimborne First School
- Swanmore College




Photo: Trout in Schools

The Wessex Chalk Stream and Rivers Trust is looking to increase the number of systems.

Schools and institutions interested in trying out a Trout hatchery should contact Tom Davis via the contact details on the back page of this newsletter.

We are particularly keen to see systems in operation in the North and East of the Wessex area, and would also welcome volunteers who could act as helpers and advisors in those areas.



- The Average person in the UK consumes 150 L of water per day
- This has grown at a rate of 1% per year since the 1930's
- If we include the water used to make the items we use every Day this increases to 3400 L
- Turning off the tap whilst brushing your teeth could save 6 L per minute
- Although we consider ourselves a wet country, parts of the South East of England received less rainfall per person than Istanbul in 2011

The Average person in the UK flushes 45 L of potable water down the toilet every day



How much water does it take to make every day items?

Mug of coffee - 140 Litres
 1lb of potatoes - 246 Litres
 Glass of Wine - 249 Litres
 1lb Rice - 2460 Litres
 Cotton shirt - 2460 Litres

Meat in 1/4lb beef burger - 11356 Litres



Drought - Continued...

The impacts of low flows on our rivers can be catastrophic. As velocities drop there are proven links to reductions in aquatic plant growth, particularly species such as ranunculus. Lower velocities also increase the deposition of silt in the river channel clogging interstitial spaces in the substrate, thus reducing available fish spawning habitat. Prolonged periods of low flows can also result in reduced abundance of filterfeeding invertebrates and a reduction of stoneflies and heptageniid mayflies, which favour clean stones and well-oxygenated water.

Reduced flows also exacerbate the impacts of pollution from sewage treatment, cress beds, fish farms and a number of other sources as potential for dilution is diminished.

Abstraction licenses and discharge consents should be flexible and reflect the environmental conditions in our rivers. Discharge consents should be set at a limit that is appropriate for periods of low flow and abstraction licenses should reflect the available water AFTER the natural environment has enough to survive. At all times there should be a defined minimum quantity of

water of sufficient quality left in our rivers to enable the maintenance of a healthy functioning ecosystem.

As you can see, it's a complicated picture for our chalk watercourses but one that the WCSRT will continue to fight. Working alongside other partners we have to believe that we can make a difference.

As an individual however, you can also make a difference, not only through your continuing support of the WCSRT but by actively reducing your water consumption at home.



River restoration, rehabilitation or gardening?

Words: Jon Bass

You will have seen mechanisation and the rising cost of labour driving crude and simplified adjustments to our river valleys, hedgerows and the wider landscape. What may have escaped your notice is that in rivers and streams this has often translated to infrequent but wide-scale clearance, leaving no soft edges as sanctuaries for wildlife. Such management is interspersed by long periods of neglect, when an open and scoured channel gradually becomes overgrown. The 10-20 year cycle of blitz and recovery has now been repeated over several decades and presents a sharp contrast to natural seasonal changes

which in the distant past were appreciated, absorbed and modified by our frequent manual interventions. Time is money, so they say. Time is also ours to give if we wish. There are many small individual tasks which could improve habitats and the well-being of wildlife. In the wider environment this activity is now focused on wildlife reserves where some excellent results are being achieved. Rivers and streams have a legacy of interference, each reach has the potential for upstream inputs and downstream barriers, which can limit restorative measures and the capacity for recovery. Such open freshwater systems are less easy to manage than isolated ponds. The intimate links between streams, rivers, villages and towns have seen centuries of exploitation and damage, but this can be ad-

ressed by informed activities that engage people. Fortunately, the daily well-being of many miles of our chalk streams and rivers is overseen by experienced local fishery keepers and managers, supported increasingly by funding initiatives through Agencies and Trusts to address the many problems associated with degraded river reaches.

On the chalk rivers and streams we are blessed with factors that support natural recovery processes and this largely explains how we still have some beautiful locations that are rich in wildlife. Always at risk but capable of bouncing back, particularly with appropriate help. WCSRT are committed to deliver that help with your assistance and in partnership with like-minded organisations.

Regional Salmon Update:

Words: Jon Bass

Despite below-average river flows, the last two years have seen an increasing number of salmon entering our local rivers which mirrors UK-wide trends. This is encouraging after a salmon slump lasting more than two decades. Any sign of upward trend is a welcome relief to local anglers who have been returning salmon alive (100% catch-and-release, c.65% UK-wide) and applying a variety of restrictions to their seasonal fishing and methods.

After May all rivers experienced a high proportion of salmon remaining in the lower reaches where they were accessible to capture (and sometimes repeat capture) until the end of the fishing season because of lack of rain and low river flows. There are surprising differences between our rivers reflected in both rod-catch statistics and data from automatic fish-counters. The Test, Itchen and Frome have recently seen numbers closer to historical levels (pre-1990), whilst the Avon

displayed a year-on-year decline (2006-2010), only reversed in 2011 (when it exceeded 1,000 salmon on the fish-counter), this is still fewer than were removed annually by rods/nets for many decades.

	Avon	Test	Itchen
2006	144	210	121
2007	126	258	224
2008	67	424	282
2009	72	185	285
2010	42	225	361
2011	138	208	297



Photo: Nigel Bennett

No strong relationships have been demonstrated between numbers of returning salmon and parr numbers in earlier years, or the conditions experienced by the early life stages. This confounds many predictions though it is fun to speculate and anglers should remember the old adage: "If you don't fish you won't catch".

Validated 2011 figures from all fish-counters were not available as this Newsletter went to press. Trends in salmon rod catch numbers are displayed below, with Avon data kindly provided by Brian Marshall, Test and Itchen data via Tom Davis:

WCSRT are promoting improved assessment of juvenile salmonid populations, serve on river-specific Salmon Groups and support appropriate habitat restoration activities in collaboration with agencies, regulators, riparian owners and local organisations.

The **WESSEX CHALK STREAM & RIVERS TRUST** is a charity, dedicated to the guardianship, protection, enhancement and maintenance of healthy, functioning ecosystems within the river corridors and catchments of the Wessex region.

OUR VISION is of healthy rivers which are valued and nurtured by the community and which exhibit:

- Sustainable and naturally abundant wildlife
- High water quality and sustained natural flows
- Fully functioning ecosystems which link the rivers with their valleys
- Resilience to climate change and future stresses associated with social and economic development

THE CHALLENGES - Pressure from agriculture, aquaculture, transport and housing development in the region has placed significant strain on the river environment over the last half-century or so. River channels have become degraded through dredging for agricultural 'improvement' and engineering for flood management. Flows have been impacted by abstraction for public water supply. Water quality continues to be impacted by agricultural run-off, pesticides, discharges from watercress beds, fish farms, sewerage systems, and septic tanks. Spawning gravels continue to be affected by siltation. Aquatic fly life has seriously declined. The numbers of salmon running to spawn are gravely depleted. Native Crayfish have been virtually wiped out and non-native species are threatening the integrity of the habitat.

HELPING US If you are as concerned as we are about the rivers of our region and you would like to assist us either financially, by volunteering to help or simply by becoming a Supporter of the Trust, please get in contact with us.



**Wessex
Chalk Stream
& Rivers Trust**

Kimbridge Lane, Kimbridge
Nr Romsey, Hampshire, SO51 0LE
01794 341874

www.wcsrt.org.uk
secretary@wcsrt.org.uk
director@wcsrt.org.uk

Registered Charity: 1130991
Company No: 6822819



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Eastgate House, Eastgate Street, Winchester SO23 8DZ
01962 857400 www.smithsgore.co.uk