



# Action for the River Kennet Newsletter

A partnership of people who care about the Kennet

## We hope you enjoy our new look newsletter for 2010

We are delighted to welcome Helen Dobie as our new editor and designer. For the first time we have emailed an electronic copy of the newsletter to our members for whom we have an email address, but hard copies are still available on request and to those who don't have access to a computer.

## Signal Crayfish Study

The problem of invasive species is one that I have frequently encountered during my environmental science degree at the University of Southampton, writes James Bumphrey, former St John's School student.

It was my interest in the natural world and my will to carry out research that had a practical application which led me towards this study on signal crayfish. My research was based on two stretches of river, one on the Lambourn and one on the lower Kennet. The research consisted of two parts, the first looked at the potential for improvements to the Swedish 'trappy' crayfish trap to increase signal crayfish

two sites. On a number of nights the efficiency of the trap was greatly increased with the modified traps catching 43 crayfish compared to the unmodified traps 4 crayfish. The results of the bait box experiment are inconclusive.

The second part of the study aimed to look into the effect of baited traps on crayfish movement. To do this 50 of the crayfish caught in the first part of the study were marked with a letter. These crayfish were then released further upstream. A set of traps was then set at 60m on the first night, 120 on the second, 180 on the third, 240 on the fourth and 300 on the fifth. This process was repeated three times over 15 nights. The amount of crayfish recaptured was very low this shows that there was probably a large population present at both sites. Crayfish were caught at

catch size. This involved the addition of mesh to the trap entrance funnel in an attempt to reduce the number of crayfish which escaped. The mesh size of the bait boxes was also investigated to see whether mesh size affected the length of time that bait was effective. Initial analysis of the results seem to show that the effect of trap modifications differ between the

all distances with the greatest number at 60 metres. One crayfish was caught 800 metres upstream just two nights after release. Previous studies would seem to suggest that this is a significant extension of the signal crayfish's natural range. I will be repeating this methodology in December to research the effect of water temperature on crayfish movement.

*The release of signal crayfish into the wild is an offence.*

## Electricity generation on the Kennet – back to the future

A contact through the ARK website has introduced the possibility of a number of the old mill locations on the River Kennet becoming small electricity generation sites about 100 years after the river was used in numerous locations to grind flour. Martin Gibson, our Treasurer, met Bert Boersma from Spaans Babcock a Dutch manufacturer of Archimedian Screws. Original developed, presumably by Archimedes,



*The picture shows an 11kw plant on a river in Somerset from a head of 2.6 metres with a flow of 600 litres a second.*

(he of "Eureka!" fame - when he stepped into a bath and noticed that the water level rose), this has been used for thousands of years to pull water from rivers and lakes to irrigate fields. Now it is used to turn a turbine in falling water and is a very efficient way of generating electricity. The upper Kennet Mills have high enough flows but only about 1 metre of head. Currently we are exploring whether this is enough to justify the investment with the various government incentives for renewable power. [Martin Gibson](#)

# Riverfly Monitoring:

## Part 1 Cased Caddisfly Larvae

I am Harry Forbes and I do riverfly monitoring for ARK at two stretches of the Kennet in Marlborough, Cooper's Meadow and Stonebridge Lane.

I do it monthly at each location, by doing a three minute kick sample and then on the riverbank I sort and count the six key indicator species which if abundant signifies good water quality. In each newsletter I shall focus on one of the key species, in this issue Cased Caddisfly Larvae.

There are one hundred and ninety eight species of *Trichoptera*, cased and caseless caddisflies (also known as sedges). The cased caddis, so called because of the case it builds itself out of gravel, sand or plant material are found all over Britain. In the two sections that I monitor I have always found the gravel case building types except once when in Cooper's Meadow I found one with a piece of hollowed out

*Photo below: Adult Caddisfly*



plant stem for a case. They range from tiny in size to about an inch or so long though a few exceptional individuals are a little larger.

The maximum number I have ever recorded is one hundred and four at Cooper's Meadow, though in the winter months I sometimes find none at all. The cased caddis has a four part life cycle. Eggs (which are sometimes laid on overhanging leaves, stones or underwater plants), larvae (which are the stage counted in riverfly monitoring and build the case), pupa (which they are for two - three weeks) and finally, from pupa they hatch out into the adult caddisfly. As adults some species of caddis have five eyes whereas some have only two. They have minute hairs on their wing (hence their name *Trichoptera*, ancient greek for hairy wings). Unlike their carnivorous caseless relatives, cased caddis eat mainly plant material.

Counting caddisflies and the other indicator species provides a useful picture of water quality. Harry's sampling is part of the Riverfly Partnership invertebrate sampling initiative.

**Next issue:** Stonefly Larvae

*Photo below: Caddisfly larvae in their protective cases constructed from gravel*



## Plenty more fish in the Kennet?

Amazing as it may seem for such a well-studied river, there is very little information on how many wild fish there are in the Kennet, writes Charlotte Hitchmough, ARK's director.

The reason for this is that although the Environment Agency has done some fish surveys below Marlborough, the results do not differentiate between farmed and wild fish. On some reaches river keepers stock farmed trout by the thousand to supply anglers, so an apparently healthy stretch of river might in fact just be a well-stocked reach. To try to establish a picture of the wild fish populations in the upper Kennet ARK is taking a two-pronged approach.

Firstly, in September 2009 we commissioned Vaughan Lewis to conduct an electro-fishing survey at ten sites to investigate recruitment of wild brown trout and grayling. His report 'River Og and Upper Kennet Fishery Survey, 2009' is posted on ARK's website. Electro-fishing stuns fish for long enough to count and measure them. The survey showed limited populations of young fish in the upper Kennet, with an unexpectedly healthy population in the Lower Og, suggesting that this tiny tributary is important for brown trout.

Secondly, after a morning of training in December, a team of ARK volunteers has been busy surveying for trout 'redds' or nests on the river bed. Counting these on a fortnightly cycle through the winter will start to give us a picture of how many trout are spawning as well as where and when spawning occurs.

*Photo above: Vaughan Lewis' team electro-fishing in September 2009*



## ARK AGM

On November 25<sup>th</sup> over 80 people attended ARK's AGM in St Mary's Church Hall, Marlborough.

After the official business of the meeting we were delighted to welcome Rose Timlett from WWF-UK and hear how WWF's 'Rivers on the Edge' project fits in to WWF's international work to protect river catchments around the world. It was exciting to hear the River Kennet described alongside the Yangtze and the Nile as one of the great rivers on the planet.

ARK's technical adviser, John Lawson, then explained how ARK has been working over the last year to ensure that the Water Framework Directive delivers positive benefits for the River Kennet. Our report *Water Framework Directive Review of the River Basin Management Plan for the Kennet*, published in May 2009 expressed our disappointment

in the River Basin Management Plans, which propose no improvement on the Kennet until 2027; and ARK's fear that the Kennet's problems had been under-estimated, making the proposed solutions inadequate. Since that report ARK has been working alongside the Environment Agency, WWF, RSPB and DEFRA on a pilot catchment plan for the Kennet which accurately reflects the problems facing the river and proposes solutions and a timescale for delivering them. The lessons learned from this exercise will be used to develop catchment plans for other rivers across the country. This work is ongoing, and represents an exciting opportunity for a small organization like ARK to make a difference to our river, and to have an impact national policy.

## Committee List for 2010

<b>Hon President:</b>	Roger de Vere	<b>Executive Committee:</b>
<b>Director:</b>	Charlotte Hitchmough	Richard Clarke
<b>Chairman:</b>	Sir Nigel Thompson	Sean Dempster
<b>Vice chairman:</b>	Geoffrey Findlay	Kevin Light
<b>Treasurer:</b>	Martin Gibson	Michael Maude
<b>Technical Adviser:</b>	John Lawson	John Hounslow
<b>Ecology Advisor:</b>	Peter Marren	

## Prizes

The ARK committee were delighted to recognize the achievements of all the volunteers who are crucial to the work we do on the river. This year we awarded a '**volunteer of the year**' prize to two people, Val Compton and Harry Forbes.

### Val Compton

Val has adopted the river in Marlborough with a passion. She has helped out at almost every work party we have held and in addition has taken on the challenge of keeping Cooper's Meadow litter free, not only while the cattle were there, but ever since too.



### Harry Forbes

Harry is a great young ecologist - the first of his new series of articles appears in this edition of the newsletter. With the help of his mother, Anna, he has taken on responsibility for river fly sampling at two sites, Cooper's Meadow and Stonebridge Lane as well as redd surveying at Stonebridge Lane. He turns up every Wednesday to join our volunteer group and his help is invaluable.



## Photo competition

Geoffrey Findlay announced the winner of the photographic competition was Jenny Masters for her 'Winter on the Kennet' photo (photo pictured above) taken at Preshute in February 2009.

*A small prize is winging its way to Jenny along with our hearty congratulations.*

# Rivers on the Edge

Broadcaster, fisherman and author Charles Rangely Wilson said that 'chalkstreams are England's rainforests'.

Temperate chalk streams exist almost exclusively in the South and East of England where a unique combination of geology and hydrology has created a cool, constant and fertile aquatic ecosystem unmatched almost anywhere in the world.

It can sometimes be hard to see the connection between the water that comes out of our taps and the water we see flowing along in streams and rivers. But the fact is the consequences of our wasteful overuse of water are now becoming clear to see as rivers like the Kennet decline.

ARK is proud to be part of WWF Rivers on the Edge project. WWF is helping to fund the Stonebridge Lane habitat restoration work in Marlborough to provide a place for people to see what a healthy chalkstream can look like. It is also working with Thames Water in Swindon to help people to use less water. WWF will be installing water saving devices in people's homes in an effort to demonstrate that we can all make a big difference to the health and survival of our rivers, just by saving water.

One third of the water we take from our natural environment is wasted. By taking only what we need, and by using water more efficiently, we can meet the demands of our modern lifestyles and still ensure there's enough water for wildlife. Water efficiency has no downside – it's good for our rivers, the wider environment, consumers (through lower bills) and the water industry.

The Rivers on the Edge project aims to help thousands of UK homes, schools and businesses cut water use, saving millions of litres of water for our rivers. To find out more about the Rivers on the Edge project go to: [www.wwf.org.uk/what\\_we\\_do/safeguarding\\_the\\_natural\\_world/rivers\\_and\\_lakes/wwf\\_s\\_freshwater\\_projects\\_around\\_the\\_world/uk\\_rivers/](http://www.wwf.org.uk/what_we_do/safeguarding_the_natural_world/rivers_and_lakes/wwf_s_freshwater_projects_around_the_world/uk_rivers/) Charlotte Hitchmough



## ARK goes to Westminster

At the end of November Martin Gibson and Charlotte Hitchmough travelled to Westminster to meet the Huw Irranca-Davies, minister for the natural environment.

The event was part of the 'Our River's Campaign' and was a chance to ask the minister what he proposed to do to protect our rivers. Charlotte was able to ask the minister specifically about the continued abstraction in the upper Kennet

and what could be done to speed up the process of getting a replacement water supply for south Swindon in place. Although the minister was unable to comment on that specific issue or intervene in the OFWAT price review process, he said he would like to see a solution, so we will be following that up with him.

*Photo above: Bella Davies (Wandle Rivers Trust), Huw Irranca Davies (Minister for the Natural Environment) and Charlotte Hitchmough (ARK) on Westminster Bridge.*

## West Overton's Wiggle

Michael Maude's project to restore the River Kennet to its original route in West Overton is looking great now the springs have broken and water is flowing in the newly dug channel.

## Objections to new riverside housing at Eddington

ARK has joined the Hungerford Town and Manor fishery in strongly objecting to a proposal to build houses on the banks of the Kennet at Eddington. At present the site is a beautiful, undisturbed stretch of river, teeming with wildlife including water vole, otter and kingfisher. Building a housing estate here would destroy for ever another bit of this precious chalk stream. The site falls within the SSSI and just upstream of the Special Area of Conservation and we hope that West Berkshire Council will see fit to turn down the proposal. The planning application reference is 09/02451/OUTMAJ.



The Trout in school season kicked off early this year. Eggs, kindly donated by the Berkshire Trout Farm, Hungerford were delivered to schools before Christmas. Within days they had hatched into 'alevins', tiny fish with egg sacs still attached. For the first two weeks of their life the baby fish are nourished by the egg sac, before they begin to swim around looking for food. The students will care for the fish until Easter when they will be released into the Kennet. ARK Trout in School is a fantastic project which provides a great platform to teach students and their families about the chalk stream on their doorstep, as well as learning all about brown trout.



*Photo above: An Alevin a few days after hatching*



This newsletter is published 3 times a year by [Action for the River Kennet](http://Action for the River Kennet)

ARK | PO Box 2919, Manton, Marlborough, SN8 4WE  
[www.riverkennet.org](http://www.riverkennet.org)

Designed and edited by Helen Dobie  
We welcome ideas and contributions.