

Rain, Rain and yet more Rain

For the second winter in a row the Kennet has received a bumper topup from the heavens.

While the Marlborough sewage works and its surrounding drainage system struggles to cope with the wettest winter on local record our new partners from Imperial College, London, are using cutting-edge research to assess the damage caused by last summer's disastrous chloropyrifos spillage. As Murray Thompson explains (page 3), they will also be recommending what needs to be done to restore the river's delicate ecosystem back to good health.

Elsewhere we report other ways in which ARK volunteers and staff have been working to improve the quality of the river – a second fish pass in Marlborough; new measures to control pollution in Hungerford, and the latest round of conservation work at our Stonebridge Meadow reserve. Equally important is our work to persuade people to make more responsible use of the water that comes out of their taps – the less they waste the more is left for the Kennet.



Wild Trout Trust

Action for the River Kennet has received yet another national prize for its environmental work. This time it was the Wild Trout Trust Conservation Award 2013, presented in recognition of our outstanding habitat improvement project at Marlborough's Stonebridge Wild River Reserve. The award also celebrated the way in which a partnership between ourselves, the St John's Foundation Trust, Marlborough Town Council and the local community is creating such marvellous shared space for wildlife and people.



Above: Winter view of the river at Stonebridge Wild River Reserve

Left: ARK volunteers help Imperial College scientists to sample the river's fauna and flora.

News from the Chairman

My son introduced me to a good new phrase the other day: 'global weirdness'. While not everyone buys the idea of global 'warming', no-one needs persuading that something weird is going on with the weather.

It's been raining again

In mid December, Kennet flows were exceptionally low for the time of year. 'We need some rain' said our Technical Adviser John Lawson. And we got some (see page 6 for more details). Good news for the river in some ways, though the sewers again could not cope and neither can the sewage treatment works. As I write the whole of the Ramsbury Triangle (down Mill Lane off the High Street) is under water as are large parts of Stonebridge Meadow and Reading Town Centre.

As ever ARK weathers the storm triumphantly. We have over 100 volunteers from a range of interests, and gave a Christmas party to show our thanks to them. We have a record number of monitoring sites (more than 40) and with help from the Rivers Trust are preparing new ways of analysing and interpreting the considerable amount of data they are generating.

Moving downstream

We held our AGM in Hungerford this year in order to develop more interest in and support for ARK's work downstream from there. To date we have concentrated most of our efforts on the Upper Kennet where the ill effects of over-abstraction were most marked. Now, as Kennet Catchment Partnership hosts, we want to spread our reach further downstream, eventually as far as Reading.

The former Rivers Minister, MP for Newbury Richard Benyon, has told us that he remains 'totally committed to the work that ARK does and would like to support us at every stage'. We are extremely grateful for this endorsement and have started a discussion with Richard about how he could help. If any readers from downstream of Hungerford would like to play a part in this process, do let us know.

We already have been fortunate to have secured help from two professional public relations experts and lovers of the river downstream of Hungerford. Since attending our AGM Mike Davis and Neil Patterson have met with us twice to advise us on how best to convey our messages to the people we want to heed them.

Water Bill

The Water Bill is working its way through Parliament, and we have



been briefed on its progress by both Richard Benyon and WWF-UK. The good news is that it includes a much-improved and simplified process for stopping unsustainable abstraction. This will be through the water companies' five-yearly price review process instead of the present complicated and inefficient 'environmental impact unit charge'.

The less good news is that the actual process of reforming abstraction is only now starting. We will be submitting comments on Defra proposals, but it will be many years before its effects will be felt. We will keep up the pressure as far as we can.

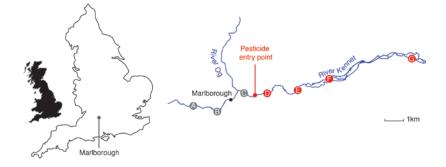
ARK's people supporters

Meanwhile our indefatigable Director Charlotte and her team continue with the ambitious programme described in the rest of this issue of River Talk. Like Churchill in relation to the RAF, I never cease to be impressed by how much is achieved by so few. My – our – thanks go to them; to our volunteers; to you our members and partners without whom ARK would be nowhere.

Geoffrey Findlay

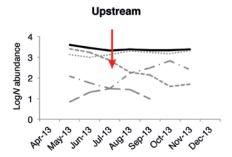
Catastrophic collapse of the River Kennet food web

But now ecological scientists are riding to the rescue



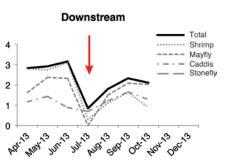
ARK riverfly monitors were the first to detect a devastating pesticide spill on the River Kennet in July 2013. Their findings sparked a campaign of intensive data collection funded by the Natural Environment Research Council (NERC) and undertaken by researchers from Imperial College London, including myself, and Essex University, with assistance from the Environment Agency, Savernake Flyfishers and many more.

Our aim is to sample the river's biota as comprehensively as possible in order to gauge the impact of



the pollution on the Kennet's ecosystem. We will collect samples every two months over the course of a year at locations above and below the spill site covering over 16km (above). Our analysis will reveal the chronic mid- to longterm effects of the pollution as opposed to those which are immediate and fatal and already well documented by the riverfly monitoring data (below).

Chlorpyrifos killed almost all of the invertebrate life within the 6km we initially sampled, but its residence time is short so it was quickly



flushed from the system. Biological recovery will not be as swift as chemical recovery. Freshwater shrimp (*Gammarus pulex*), which spend their whole life in water, have been the worst affected (below) and their recovery relies upon individuals migrating up or downstream. Other lost species may have to compete with pollution-tolerant species in order to reinvade and re-establish.

Our preliminary findings suggest significant effects are evident beyond those of invertebrate extinctions. For instance, fish are being left without food and microorganisms, such as algae, without consumers to keep them in check. The food web is therefore already undergoing profound restructuring, which we predict will continue to intensify before entering the recovery phase.

Once completed, our study will provide landowners and other stakeholders who use the Kennet with important information on the ecological integrity of the river and how the river fauna reassemble following this kind of catastrophic event. These insights will in turn help them to develop the management practices needed to conserve the ecosystem and its economically valuable fish stocks. For instance, in the near future we aim to develop a monitoring tool that can test for sub-lethal effects of pollution before species populations have been lost, thus complementing the riverfly data already collected.

Dr Murray Thompson

Above top left: Our study sites above (grey) and below (red) the point at which pesticide entered the River Kennet. Comparing data collected between the sites will allow us to quantify the biological impact of the pollution.

Left: ARK riverfly monitoring data collected during 2013 from Elcot Mill and Stonebridge Lane, upstream and downstream of the point of pollution respectively. Note how shrimp, which were once the most prolific species have the lowest relative abundance three months after the pollution. Scientists to sample the river's fauna and flora.

Marlborough sewage incident

On 10 December the Environment Agency announced the action they had taken in response to ongoing pollution from Thames Water's Marlborough Sewage Works.

We were hoping for a prosecution, but it did at least include formal warnings to Thames Water about:

- two breaches of their environmental permit
- allowing storm discharges not in storm conditions
- allowing growth of sewage fungus on the bed of the receiving watercourse

This year's high groundwater conditions mean that the Sewage Treatment Works are again having to put untreated sewage straight into the river. This is despite the new storage tank which was built over the summer to give the works extra capacity. We are disappointed that Thames Water's investment has not been sufficient to stop this pollution.

It is clear that the Environment Agency rely completely on the public to let them know when there are discharge problems and without lots of evidence they can't bring a prosecution. So please remember:

The number to report pollution on is 0800 807060.

Charlotte Hitchmough

Cooper's Meadow Fish Pass

Marlborough's latest fish pass is now in place and its tributary is as 'natural' as one might imagine.



Hot on the heels of the successful Town Mill Fish Pass constructed in 2012, we have recently completed phase two of our fish easement work in Marlborough. Phase one replaced the steep drop left by the Old Mill Wheel at Town Mill with a series of smaller steps, which fish can access. The second phase enables fish to swim along a new channel bypassing the large sluice gates into the Mill Pool at Town Mill. The new sarsen-lined bypass channel, designed by ARK's Don Harris, provides an additional length of stream, which not only provides a clear route to swim upriver, but also a great new spawning habitat. In due course, this will be colonised by a range of species that prefer fastmoving water.

Charlotte Hitchmough

Cleaning up Hungerford's Kennet

ARK support is now helping to improve new stretches of the river.

As our Chairman has explained (page 2), ARK is keen to become involved in projects downstream of its traditional base in Marlborough. One recent example involved the re-routing of contaminated storm water from the main road in Hungerford away from the River Kennet and it tributary Harvey's Stream.

Both the water courses and the adjacent water meadows are designated Sites of Special Scientific Interest, but for years they have suffered from dirty water running off the road into the protected chalk streams. The solution, funded by Natural England, ARK and the Trustees of the Town and Manor of Hungerford with the support of West Berkshire Council, connected the existing gullies into brick chambers which will in turn feed into a soak-away that naturally filters pollutants before they get into the river.

Charlotte Hitchmough

Improving local habitats

ARK volunteers continue to work hard (and have fun) making the Kennet a better place for wildlife and people.

Stonebridge Meadow

Last August and September regular ARK volunteers were joined by members of the public and Marlborough College students at seed scattering afternoons. The Hills Group kindly donated a skip of greenwaste compost to mix with the native wild flower mix that will gradually transform this section of meadow.

Locally sourced oak has been carved into two benches and two new interpretation panels will soon be in place, one focusing on Poulton Footbridge and the other a large map showing footpaths and highlighting what to see and where. A noticeboard to keep visitors up to date on events and developments will also be in place soon.

Restoration

Many Wednesday afternoons have been spent installing faggots and shifting tonnes of gravel and infill to restore an eroded riverbank at Poulton Footbridge at the far end of Stonebridge Meadow.



Sometimes large woody debris (LWD) can be beneficial in a watercourse, providing habitat for invertebrates, but at other times it needs to be removed. Contractors and ARK volunteers worked together to take out a large fallen willow that was blocking the flow at Stonebridge. A log pile for wildlife was built from some of the pieces and the remainder was repositioned in the river to deflect the flow.

Volunteering

Whether in the river or beside it, there is usually an ARK Volunteer Task happening every week. This year we will continue to work at Stonebridge, carry on tackling the invasive Himalayan balsam (if you spot some, please let us know where), continue our restoration of a carrier stream at Kintbury, as well as maintaining our projects at Cooper's Meadow and the Triangle in Ramsbury. To find out more, call Anna Forbes

on 01672 511028 or visit www.riverkennet.org/get-involved

Anna Forbes





Above: Eddie Starr operates a digger kindly lent to us by A4 Hire of Hungerford to help restore the Ramsbury Triangle.

Bottom Left: Volunteers removing a large willow tree that fell across the river at Stonebridge Meadow.

Bottom right: An ARK moth night at Stonebridge Meadow last October.

Down memory lane

Norah Grant, who lives in Tasmania, wrote recently to Anna Forbes' mother with this recollection of Stonebridge Lane in the 1930s.

'Stoney' to me was just the thatched cottage at the top, where your mother's school friend lived, the hill to whizz down on our bikes before rattling over the bridge. Then there was a market garden owned by Mr Hillier the green grocer in the Parade. At the bottom of the hill was a magnificent horse chestnut tree, which had super conkers. The river was very weedy and not suitable for paddling, we went to Minal for that.

Anna Forbes

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drains

Sewer flooding is an increasing problem.



More houses, changing weather patterns, leaky sewers and failing pumping stations have caused raw sewage to flow into the Kennet.

Although the rainfall and groundwater levels in February 2014 are exceptional, Thames Water say 'Sewer flooding is unacceptable and we treat all cases with the highest priority. We prioritise our investment for potential flood alleviation schemes, so it is important that you report all flooding so we can keep our records up-to-date'.

Please report all sewer flooding incidents, to the Environment Agency: 0800 807060 and Thames Water: 0845 9200 800.

ARK is also supporting Thames Water's campaign to end sewer abuse. Domestic drains were not designed to cope with anything other than wastewater, toilet tissue and human waste. The message is simple, if it's not water, toilet tissue or poo, please ... bin it - don't block it.

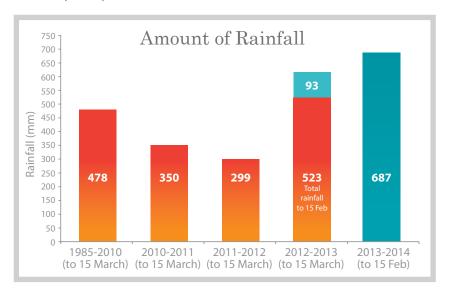
Cooking fats and oils are another big cause of sewer blockages. Think - not in the sink! After cooking, fat, oil and grease should be left to cool - it can then be put in the bin or mixed with seeds and nuts to make a feeder for birds.

Charlotte Hitchmough

Helping our Another wet winter!

After two years of below-average rainfall, 2012 and 2013 reversed the trend.

More important still have been the figures for the winter and spring months. This is the period when the Kennet's chalk aquifer receives its vital re-charging. As the graph shows, nearly 30% more rain fell between 16 October 2012 and 15 March 2013 than in an average winter – and for the same period of 2013–14 the figure will higher still, with January 2014 alone reaching a record figure of 219mm (8.6 inches) As well raining a lot it is has also been raining harder. In the late 1980s there were around 25 days in a year with more than 10mm of rain. Since then there has been



a gradual upward trend, with 2013 experiencing no fewer than 31 occurrences - including 23 December when an unprecedented 46.4mm (1.8 inches) fell in Marlborough in a single 24-hour period.

Eric Gilbert

For more detail about our local weather patterns, visit www.windrushweather.co.uk

Getting away from it all

Eddie Starr, Ramsbury riverkeeper and long-standing ARK volunteer, is interested in renting out his lovely Cornish holiday home to sympathetic fellow ARK members.

The three-bedroom detached chalet is positioned high on the cliff tops of Seaton and boasts excellent views of the sea and the cove. The perfect place to stay for instant relaxation and a temporary change of scene from our glorious Kennet. What's more, Eddie has generously promised to make a donation from each letting fee to ARK funds! For more information contact Judith or Eddie Starr - 01672 521173

ARK at school

Although the New Year has only just begun, it has been an exciting and productive start for the Schools programme.

Three local schools are taking part in our 'Trout in the Classroom' project. The tanks were installed in the first week in January in St Peter's, and then subsequently in St John's and St Michael's Aldbourne. At the time of writing our 200 baby trout are carrying their egg sacs on their underbellies as a source of food. We have trained up 'trout monitors' in each school to undertake the basic day to day care, and are keeping a close eye ourselves to make sure that as many trout as possible make it to 'release day', just before Easter. We have created a blog to record and share our Trout adventures – please look it up at www.arktrout.blog.com

Once the Trout are released we will be starting our new classroom



project – bringing tanks of tiny baby glass eels in to schools. We are working closely with our colleagues at Severn & Wye on this project as it will be the first time we have run it in the Kennet region. We are delighted to have had a great deal of interest from our local schools, who are excited to be involved.

Helen Kelly

Ketso Kit

We are delighted to have won a 'Ketso Kit' at the recent Catchment Based Approach Workshop held at Fishmongers Hall in London.

Ketso means 'action' in Lesotho and is designed as a tool for creative engagement. By using Ketso, everyone can develop ideas at the same time, making effective use of people's time in meetings or workshops.

Charlotte Hitchmough said: 'As ARK starts to move downstream and engage with new communities along the Kennet this will be really useful to help us find out what people want from their river and how we can develop solutions. The Wandle Trust have used it to great effect and I can't wait to try it out'.

Charlotte Hitchmough

Make saving water your New Year's resolution

Swindon residents have been asked to save water by spending less time in the shower and taking advantage of some free water saving devices.

The award-winning campaign is a partnership between Worldwide Fund for Nature (WWF), Waterwise, Swindon Borough Council, Action for the River Kennet and Thames Water. Swindon was chosen as a target area as it's classified by the Environment Agency as 'seriously water stressed'. This means all available sources of water in the environment are already in use including the River Kennet, which is a precious habitat for fish and wildlife.

Since September, when Thames Water joined forces with the Swindon Advertiser to promote the campaign,

thousands of residents have requested free water-saving devices for their homes, resulting in a combined saving of around 65,000 litres a day. This takes the total number of homes actively saving water in Swindon to almost 20,000 – a major achievement!

To arrange a home visit or to order your water saving freebies visit www.thameswater.co.uk/swindon or call on 0800 358 6665.

Helen Kelly

ARK People

Teresa Wheeler



Studying Geography developed my interest in the environment and watching the river near my home at Manton made me acutely aware of the problems facing wildlife of the river. I enjoy the camaraderie of the Wednesday afternoon volunteering and the variety of tasks, but most of all being outdoors and doing something useful.

Harry Forbes



I became a rive fly monitor in 2008. I am now ARK's River Fly Coordinator and train new monitors. I coordinate redd spotting as well as being a regular Wednesday volunteer. At Stonebridge I have been involved in species recording, and have contributed to ARK's growth by organising the successful raffle to help fund the new pond and reedbed.

Carolyn White



I joined the ARK team in 2012 to support Charlotte. It's a brilliant role, no two days are ever the same and I've learned lots about the river. Having grown up near Newbury I've always regarded the River Kennet as 'mine'. It is a pleasure to combine my desire to protect the environment for future generations with my strengths, and call it work!

Dates for Your Diary

Tuesday 11th March

Tim Clarke will lead a meeting for farmers at Newbury Rugby Club to learn more about the 2014/15 Capital Grants scheme, which funds infrastructure to minimise diffuse pollution to rivers and groundwater. 16:30pm – 19:00pm, refreshments provided. RSVP or more details, contact carolyn@riverkennet.org or timothyclarke55@gmail.com

Saturday 29th March

'Muddy Walks' training. A repeat of last year's popular course showing people how to spot and report pollution getting in to our rivers from roads, fields and tracks. 10:00am–2:00pm, refreshments provided. Keep an eye on the ARK website for final venue details.

Tuesday 15 April

Come along to the first of this year's Stonebridge Meadow Reserve moth trapping nights, or one of the similar events on Saturday 10 May, Friday 6 June and Saturday 12 July.

For more information please visit our website, Facebook page or contact Anna Forbes (anna@riverkennet.org; 01672 511028 or anna@riverkennet.org).

Websites worth visiting

The Wild Trout

Trust stimulates hands-on projects that help others to help themselves with habitat improvement in and around rivers and lakes. Any individual or organisation caring for a wild trout population, anywhere in the UK or Ireland, can call on the Trust for practical help, advice and support.



To find out more please visit: http://www.wildtrout.org



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t: 01672 513672 e: info@riverkennet.org Registered charity number: 1120725 Members of ARK receive a copy of this newsletter either by mail or email.

If you'd like to find out more about ARK, volunteering opportunities or membership please visit our website at www.riverkennet.org or contact Carolyn White at carolyn@riverkennet.org Have you visited our exciting new website yet? It's been designed for us by Mole Productions of Marlborough and you can find us here: www.riverkennet.org.uk

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