

# Ouse & Adur Rivers Trust



**Autumn 2013**

**Issue No 11 Charity No 1082447**

***A Member of the Rivers Trust***



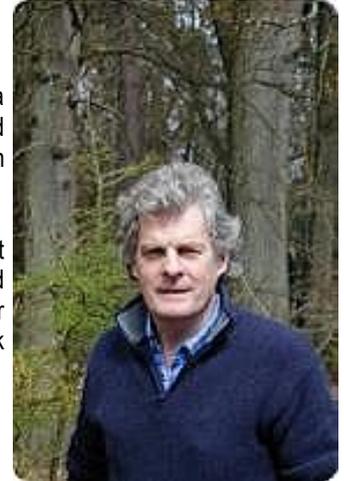
# Current Events



## A NEW FACE

OART now has a new Chairman, Dr. Hew Prendergast, he was elected by the Board of Trustees at a meeting on the 2nd. October. Hew has been a long standing member of first SOCS and then OART and has an impressive history of work in environmental management and conservation. We are grateful to him for taking up the post and look forward to his stewardship of our organization.

Hew has taken over from Robin Akers, who has reluctantly resigned from the post as he felt he did not have enough time to fulfill his duties to his satisfaction. We are sorry to lose Robin as he has served OART with diligence and hard work and guided us through a period of intense activity in relation to our being one of only ten pilot catchments to spearhead the implementation of the WFD (Water Framework Directive). However, Robin is staying on the Board of Trustees and his input will be invaluable.



## MEMBERSHIP AND VOLUNTEERING

We are just about maintaining our membership numbers, but we do need to get more people aboard to ensure the continuing viability of the Trust. Our core activities such as chemical testing and biological monitoring of our rivers are funded entirely by members' subscriptions and donations.

## YOU CAN HELP !

Tell your friends about us and the important work that we do. Get them to have a look at our web site where they can see for themselves. Request a membership form from the site and persuade a friend to join. If you can each recruit just one new member it would put us on a sure footing for the future.

We also need more volunteers to help with our various activities, particularly in the River Adur area where we are rather behind in our aspirations. Even if you could only do one or two days a year it would be of great value to us.

If you think you can help, please phone/contact any one of us listed on the back page of this newsletter. We would be delighted to hear from you.

## FACEBOOK



It has been suggested that OART should have a "Facebook" page. Presently we do not know anyone within the organisation who has either the time or else the knowledge to do this.

If one were set up, it would need to be monitored and managed on a regular basis.

If there is a member of OART who feels she or he would like to do this, please contact us via the web- site.





# AWARD

The MORPH project has received its second award of 2013 to go alongside the Institute of Civil Engineers Commendation we received earlier this year.

This time the project came out as the overall winner of the Wild Trout Trust Conservation Awards - Professional category, against some stiff competition from across the country.

The MORPH project has been running as a partnership between OART, the Environment Agency and Royal Haskoning DHV since December 2011.

We are all delighted to have received recognition for the works from an engineering and a conservation perspective. This highlights the importance of partnership-working which brings expertise from the various organisations

## Visit to Chailey St Peter's School

OART was delighted to be invited by Sara Fazackerley, Year 6 teacher at St. Peter's Primary School, Chailey. We visited in order to participate in the Environment Awareness week that the school was running for the pupils. Our objective on the visit was to show the Year 6 children what type of macro-invertebrates, (mini beasts), live in the local streams and how they can be identified and scored to show the health of the stream. This is done by netting a local stream; in this case the Northend Stream and then carrying out a biological monitoring exercise.

The thirty one children in the class were divided into six groups and each was given a tray of samples to examine and then identify what small creatures they could find. Each type of mini beast found is allocated a score from one to ten according to its tolerance to pollution. Those scoring ten are the least tolerant and those scoring one the most tolerant; so the higher the total score the better the water quality.



We provided a chart to help the children identify each of the creatures they found by such methods as counting how many legs, the number of tails, if they had shells etc. Next they entered them on a score sheet for each group. At the end of the exercise we added the scores of each group together and then calculated an average score for the stream. We were delighted to see that it scored fairly high showing that it was in pretty good health.

We were very impressed with the children, their politeness and behaviour also by the excellent questions they asked. They are a real credit to their parents and their teachers.

**Sam St.Pierre**

# Project Officer Report

Once again time seems to have flown by but the past couple of months have seen a lot of activity on both the Ouse & Adur Rivers.

## **MORPH (Middle Ouse Restoration of Physical Habitats):**

The restoration work to the wild flower meadow at Spring Meadow has been moving forward and following a series of vegetation cuts across both the established areas (for hay) and the restoration areas (for clearance) the vegetation is beginning to establish as hoped. A programme of spot spraying to remove thistle, dock and ragwort is ongoing and both OART and the Environment Agency have been undertaking pulling of Himalayan Balsam on a regular basis. A final re-seed of the damaged areas will be done during October and the site will then be monitored over Winter before phase 2 of the restoration begins in Spring 2014.

The project at Buxted Park has been nominated for a Wild Trout Trust/River Restoration Centre Conservation Award and has reached the final stage. The winner is to be announced on 16<sup>th</sup> October and we are hopeful that we may have a conservation award to go alongside the ICE Engineering (Sustainability) Commendation Award we received earlier in the year.

## **ARPHA (Adur Restoration of Physical Habitats):**

ARPHA has now begun in earnest and at the time of writing the project to remove the tilting gate structure at Shipley, on the Knepp Estate, is approximately half way through. The structure has been removed and now works are being undertaken to slightly narrow the channel using brushwood berms in order to retain the required depth of water as well as create a more diverse flow regime. This project will remove a blockage to fish passage as well as creating a more natural river environment for a number of species. In addition the works at Twineham are in the process of being finalised and we are hopeful that these structures will also be removed by April 2014. As the ground works season nears an end we are now looking forward to 2014 when we hope to progress further projects for the MORPH / ARPHA projects.

## **BRUCE (Bevern Restoration):**

Planning permission has been granted for the creation of the backwaters and we are now almost ready to begin works on the ground (we are working through a couple of archaeological constraints). As the weather begins to change it is likely this may not be completed until Spring 2014.

## **Barcombe Mills Elver Pass:**

Having received funding through the DEFRA River Improvement Fund OART have fitted a number of elver/eel passes through the New Weir Channel at Barcombe Mills, a priority site under the EU Eel Regulations (2009). Due to the number of structures a total of 6 passes were fitted; these passes are made from HDPE plastic and contain a dual density brush which provides passage for both elvers and larger eels. We are now looking at options to monitor the success of this project via remote cameras. A big thank you must go to the Environment Agency Ops team who fitted the passes free of charge to OART. Also to Gareth from the Fisheries & Biodiversity team for his help and advice throughout.

## **River Uck Habitat Surveys:**

The final analysis of the Uck survey data is underway with results currently being entered onto maps of the catchment. I hope to get the final report completed by mid November and this will be available on our website. Due to the success of this project we are now looking to roll this out across the wider Ouse & Adur catchment with a rolling programme of surveys. This project has provided a wealth of information on the current state of the River Uck and its tributaries and we hope to be able to begin looking at areas where improvements can be made.

## **Finally.....**

Away from the ongoing projects OART has been asked and accepted the role of chairing the East Sussex steering group for the new Internal Drainage Board. The roll was accepted by our Vice Chairman Sam St Pierre. I will be sitting on the group as well.



Additionally, we are in ongoing discussions with West Sussex County Council regarding hosting a series of water based engagement events across the county to raise awareness of issues around water usage and quality as well as flooding. We hope to have received funding for the first of these by the time this is published !

So all in all another busy period with progress being made across a number of areas. As the seasons change we will be focusing on our strategy and developing projects for 2014.

**Peter King — Project Officer**



# Another Alien !

By Sam St.Pierre

The Wels Catfish, *Silurus glanis*, is a fish native to central Europe which has now been introduced to the UK. It is probably called catfish because of the barbules around its mouth that look like whiskers. Like most other alien flora and fauna, it arrived by the whim of someone who thought it was a good idea at the time. However, this fish is like no other species found in Britain's freshwater habitats. It will grow up to 3 metres in length and weigh up to about 100 kilos, if not more. It has a very large mouth and will eat almost anything that moves including fish, eels, mammals, crustaceans, reptiles and birds.

There is (bizarrely) a Catfish Conservation Society in the UK dedicated to preserving these monsters in lakes, so that they may be caught by dedicated anglers who are only interested in hooking a really big fish. One was recently caught in Norfolk weighing 52 kilos (115 lbs) and the incident was much trumpeted on the internet.



Unfortunately catfish are turning up in the tidal section of the River Ouse, but I have not heard any reports of them being found in the Adur. I say unfortunately because there is a danger that these avaricious aliens could have a severe impact on the ecology of the river. This has happened in the River Ebro in Spain, where the catfish has decimated the indigenous fish, particularly the carp that used to graze the water plants. The effect has been that long sections of this river are now choked with reeds and other flora.

What can be done about it? I think the answer is not a lot really. Any angler who catches one in the river should knock it on the head. They are reputed to be edible, but somehow I don't think I would fancy eating one. Otherwise I fear that we will just have to wait and see how the situation develops. I wonder if they would feature in the menu of an Otter should they return to inhabit the river.



## Pepper's Pot Pourri



### Tiddlers



When I was a boy, living on the edge of Bristol, I caught lots of tiddlers, which I now know as *Gasterosteus aculeatus* or the Three-spined Stickleback. Some of them, I remember, were infested with the intermediate form of a tapeworm, *Schistocephalus solidus* which they pick up from eating crustaceans such as *Cyclops*. Infected fish are ingested by fish eating birds, where the tapeworm develops and lays its eggs. These are passed out in the bird's faeces which, if they get into the water, infect another generation of crustaceans, to complete the complicated life-cycle. The tapeworm is unusual as it is hermaphrodite, i.e. each individual is both male and female. It can reproduce by self-fertilisation, by mating with a sibling or with another individual. Each of these strategies has advantages. Selfing or mating with a close relative helps to preserve the specialised genetic make up but out crossing allows more genetic diversity and the possibility of adapting to changing circumstances.

We do not find many 'tiddlers' now when carrying out our routine sampling but this may be related to the collection method we use and it does not necessarily mean that they are becoming rare. The Three-spined Stickleback can be found in streams and ponds but it can also be found in the sea and estuaries. They have from two to four spines on their back but usually three. They do not have scales but have armoured plates, which are more developed in the marine form. The marine form is anadromous, that is it lives in the sea but comes into brackish or freshwaters to breed. The genetic differences between these two types have been studied. It appears that the fresh water form has developed on a number of occasions from the marine form. The armoured plates are advantageous in the sea where there are more large predators but, in fresh water it is better to be lighter and faster. The change over from one form to the other can take place in as few as ten generations.

The life cycle of this fish has been studied in some detail. During the breeding season the male Three-spined changes colour and acquires a red 'chest' He then constructs a nest on the bed of the stream or pond made of sand, algae and debris, all glued together with a protein produced in his kidneys. This he defends from other males but attracts females to enter the nest and spawn. The eggs are immediately fertilised with his semen. Several females are enticed into laying eggs in his nest which is now defended and he uses his pectoral fins to promote a flow of water to keep the developing eggs oxygenated. When the young fry hatch they remain in the safety of the nest until their yolk sac is used up. When they emerge the male chases them around to 'train' them to avoid danger – or does he just want to be shot of them? Heavy rain, as experienced this spring, increases the water flow making it necessary for males to construct more robust nests. This uses up more energy and may lead to lower productivity.

The less common Ten-spined Stickleback has, as its name suggests, from eight to twelve spines and in some books is referred to as the Nine-spined Stickleback, so best to stick to the scientific name of *Pungitius pungitius*. During the breeding season it differs from the Three-spined by developing a black throat and belly.



# Jim's Diary



Mid July 2013—to Early October 2013

## JULY

**Saturday 20th.** was a very pleasant day for a walk along the middle Ouse from just above Barcombe Mills to Hamsey. There was a slight north-east wind and a very low river flow. I watched a pair of buzzards soaring high on the thermals and being mobbed by a pair of crows. All along the river I could hear birdsong from the warblers and I saw a turtle dove near Hamsey. The worst sight of all was the three dead sea trout at various places along the river. The flow was a disgrace. On my way home I returned to the Mills feeling more than somewhat disillusioned with the flow of the main Ouse.

**On Wednesday 24th.** I did something different and walked across the South Downs from Lewes to Streat Hill Farm via Mount Harry and Black Cap. It was fine and warm with good distant views towards Surrey in the far distance. There were several downland birds to be seen and plants in flower especially along the roadside verges at the foot of the hill. I saw a display of scabious and knapweed which looked marvellous.

**Wednesday 31st.** arrived and therefore I celebrated my birthday on a damp overcast day but I made up for this later by having a meal with friends which made it a very enjoyable day. A fine pike had been caught and returned. Its weight was some 20lbs. In a corner of the local playing field where the ground was soft I noticed a large wasp nest had been dug out by a badger.



## AUGUST

**Friday 2nd.** was a very muggy and sticky day with the feel of a brewing thunder storm. I saw two kingfishers as I walked the Ouse which was well down. Some dace were rising on the river and I even saw four late mayflies. Later that night at 1.00 am the storm broke with a vengeance with some local sheet and forked lightning and heavy rain. The next day was much fresher as a result of the storm.

**Sunday 4th.** was the day for yet another clear up around Barcombe Mills. I gathered 31 bags of dog mess plus the usual cans and bottles. Why people cannot clear up behind themselves is beyond all understanding. The favourite thing people do with their dog mess bags is to 'hide' them behind a fence post, throw them into a tree or put it amongst bankside cover.



**Monday 5th.** saw a walk along the River Uck from Isfield to Uckfield. Along the way I saw several deer and plenty of the ever present invader the Himalayan balsam. The plus side included the hobby I spotted and also quite a few dragonflies, damselflies, chub, roach, and dace. The down side consisted of the low flow and all the rubbish from a well known fast food outlet.



**Sunday 11th.** was a day for a walk along the main Ouse from the Mills to Hamsey. It was fairly quiet until I disturbed a pair of herons and saw a small white egret. I sat down for a while to watch a fox working its way along a hedgerow hunting out something for lunch.

**Friday 16th.** was the day a former parish councillor and I picked litter from our parish boundary with Fletching and Uckfield. The area we covered included Beeches Road to the bottom of Short Bridge Hill then up Darwell Hill to Lodge Wood and all the way down into Isfield village. We even poured away several pints of various beers which had been dumped. There was a complete black sack full of cans and bottles which could have been leftovers from a party. At least we could recycle the cans and glass bottles at Isfield village hall recycling bins. Our total added up to seven black sacks full of all sorts including fifteen large catalogues which we reported to Wealden District Council for them to recycle.

**Monday 19th.** and work had started to reconstruct White Bridge. I walked to the banks to clear up rubbish left by weekend visitors and yet again filled a large sack with general rubbish, wine bottles and even a portable barbecue. I was contented that it was tidy again but could not help noticing the very low flow in the river.

**Saturday 24th.** saw mortality on a local lake where blue green algae was present because of the lack of rain and very low water levels. This was a cause for concern all around.

**Wednesday 28th.** I went round the Mills after the bank holiday to clear up. What a filthy lot some people are although nothing surprises me any more where litter and the general public are concerned.

**Friday 30th.** saw a fair number of butterflies including clouded yellow butterflies and also the odd painted lady on the wing on a warm sunny day.



## SEPTEMBER

**Monday, 2nd** was a warm and sunny day in the lower Ouse valley. Several shoals of mullet were in the area around The Sound near the mouth of Glynde Reach. A kingfisher flew past and several cormorants were perched like black sentinels. I saw another hobby. As the tide flooded in my thoughts went back to the days of the old cement trade when there were boats on the Ouse with names such as MVs Celtic and Ferrocrete also Comerty Festivity, Will Everard and Federation. These little coasters all came up the Ouse at various times to Asham Quay where they picked up 200 tons a time of bagged cement from the cement works which was once a thriving industry there. The boats arrived under Trinity House pilotage from Newhaven. They delivered cement to the Isle of Wight and sometimes to the Channel Islands. My eyes glanced across to where the cement works stood by the huge quarry which has been filled in now with rubbish. All of a sudden I heard a huge disturbance. As the tide came in over the shore a seal slid away with a splash after a mullet lunch.

**Tuesday 3rd** was a day for yet again another litter pick through the upper village at Isfield. I found the usual types of rubbish thrown by

drivers speeding their cars and taking little notice of a yellow jacket. The poor bird life had taken a hit again this time it was two blackbirds and even a wagtail and a robin. I gathered the inevitable large collection of litter.

**Thursday 5th** started warm and then became a hot day reaching 88°F. I was concerned because of the very low river flow in the Ouse. I am proud to say my neighbour and I Wealden Community Best Community Garden competition. On my return from receiver and was shocked at the flow at the Mills.



cerned about salt incursion picked up first prize in the ing the award I went to the

**Sunday 8th** should have been a Task Force day and had been scheduled to be a gravel raking day. This activity had to be cancelled due to the very low water conditions in the Bevern. Disturbance to the silt and mud would have caused mortality. Instead I went for a walk along the Ouse where the flow was still dreadful.

**Wednesday 11th** was the day the flow over the Mills had stopped completely. The Environment Agency was notified and dissolved oxygen levels were taken later that evening. Some 20 sea trout were reported dead over the summer when the very life of the river had been under a very severe threat.

**Tuesday 17th** saw heavy overnight rain. At last there was a very slight increase in flow of the Ouse and the Uck.

**Thursday 19th** I noticed the hedgerow harvest was ripening fast. times because of the lack of moisture during the long dry spell. I house. Mushrooms should always be cut and not pulled. This is more mushrooms when they are cut. Several types of butterfly



The blackberries and sloes were not as large as some-cut a few early mushrooms in the fields behind my because the spores are left in the ground to produce were around and the Ouse flowed a little better.

**Sunday 22nd** was a day when a lot of House Martins and some Swallows were feeding-up and moving down along the Ouse valley in preparation for their long journey home across which would take them to France, Spain and Morocco all the way south to South Africa. They can cover 200 miles a day at flight speeds of 17-22 mph and even up to 35 mph maximum speed. I saw a Red Kite too that morning.

**Monday 23rd** I cleared more litter from the Mills and the usual dog mess accumulating to more than 20 bags again. In the Mill Pond I saw a large shoal of bream in the sunshine. The river flow was still worrying me and I checked again for salt incursion.

**Wednesday 25th** was a special day for a local resident because it was her 92nd birthday. I visited her with a small gift.

**Saturday 28th** saw a fine day which was just right for the OART Open Day at the Mills. There were a lot of people about and many were interested in the Trust's work on the Ouse and Adur. We watched as the flow was falling away yet again.

**Monday 30th** I walked along the banks of the Ouse and heard a splash amongst the riverside vegetation. I had disturbed a stoat and in its panic it had jumped into the river and swum across the Ouse. It got to the other side and stood briefly before taking cover which in turn disturbed a rabbit sheltering under the brambles. I had never seen this happen before.

## OCTOBER

**Thursday 3rd** was a day of heavy rain which made little difference to the river.

**Sunday 6th** was fine and sunny so I called at the Mills and then walked back up river to Isfield. I called in at the Lavender Line Steam Gala. There were two small engines named Alfred and Judith from the Port of Parr in Cornwall which were used in the china clay processing works there. I had a trip up to Worth Halt as they were guest engines. Also I saw traction engines and vintage transport.



**Monday 7th** saw a clear up of litter in the village. This litter consisted of the usual fast food containers and other debris and I finished just in time to catch the bin crew. By this time most of our swallows and house martins had departed. There had been large flocks gathering around the Ouse and Cuckmere estuaries. While at Southease looking at such a gathering I wondered if the birds from the six nests on my house were among them.

**Tuesday 8th** and I took a walk locally to look at the lakes. At around 2pm I sat on a fallen branch to eat a few good blackberries and watch dragonflies. My attention was drawn to a group of three buzzards calling on the thermals high above. They were joined by a couple of crows which tried to disrupt them but they gave up after five minutes and flew off. A lot of acorns had fallen from the oaks and I watched jays collect them to stash away for winter but thought the wood pigeons might beat the jays to it. No doubt readers will have seen the large numbers of hawthorn berries this year. I hope there will be some left to provide winter food of our winter visitors such as fieldfares and redwings when they arrive.

I close this diary and hope that our farmers and landowners had good crops from their harvests. Also to thank them all for their support and send them best wishes for Christmas and 2014.

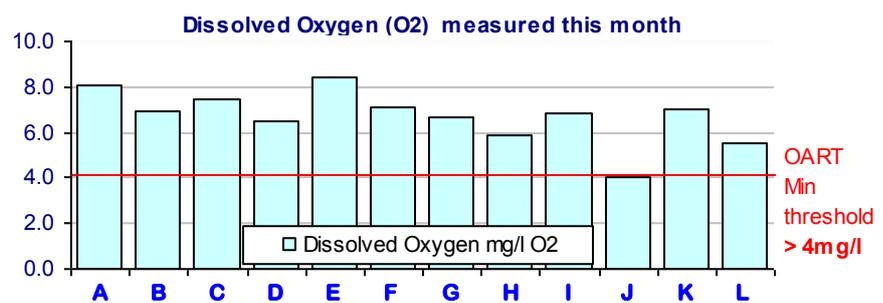
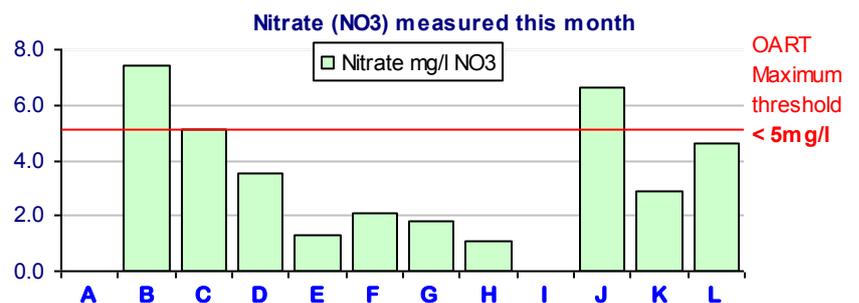
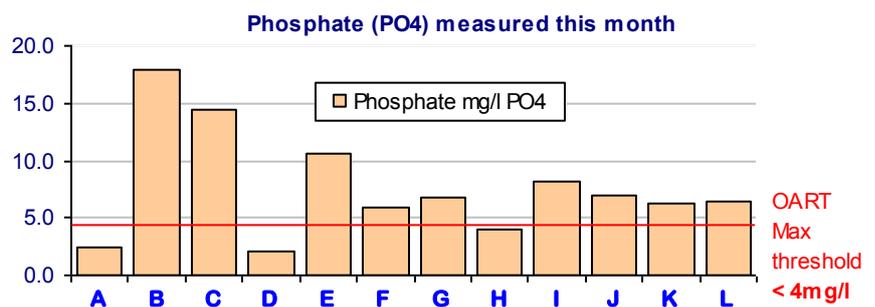
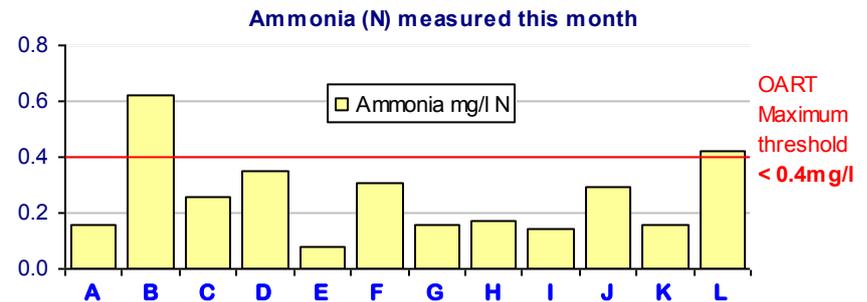
**Jim Smith**

OART Field Officer

# Water Quality Results - October 2013

Every month we produce a report based on the results of the chemical analysis of water samples collected from the 12 locations in the River Ouse catchment. This can be viewed in full on our website.

Locations tested each month	
<b>A</b>	Bevern Stream - Ditchling Cemetery
<b>B</b>	Bevern Stream - Spatham Lane, nr Ditchling
<b>C</b>	Bevern Stream- Streat Lane, Streat
<b>D</b>	Bevern Stream - Plumpton Green
<b>E</b>	Plumpton Mill Stream - Confluence with Bevern, East Chiltington
<b>F</b>	Bevern Stream- Novington Lane, East Chiltington
<b>G</b>	Bevern Stream - Hurst Barns, East Chiltington
<b>H</b>	Bevern Stream - Bevern Bridge, South Chailey
<b>I</b>	Bevern Stream - Holmans Bridge, nr Barcombe
<b>J</b>	Bevern Stream - Clapper's Bridge, nr Barcombe
<b>K</b>	Bevern Stream - Redbridge Weir, nr Barcombe
<b>L</b>	Bevern Stream (lower) - Nr Barcombe Mills



## Comment on the results for October 2013:

Chemical testing at the twelve sites along Bevern Stream was conducted on 6 October. The longer nights in early October might have been expected to result in significantly lower water temperatures than last month but these were on average only 0.7 °C lower. The persistent dry weather and mild spells have meant that evaporation and transpiration have continued throughout September and what little rain has fallen has not affected flows for more than short periods. Samplers reported standing water but little if any flow at Ditchling Cemetery and Spatham Lane, extremely low flows at Streat Lane and Plumpton Green and very low flows at sites downstream of and including Plumpton Mill Stream; turbidity was reported to be very slight or reasonably clear.

Results were again poor with phosphate levels mostly high to very high and, again, persistent. Ammonia levels were mostly significantly higher than in September, although much lower at Plumpton Green this time. Dissolved oxygen levels were, however, significantly lower in October at all sites with the exception of Redbridge weir; the lowest value (4 mg/l) was recorded at Clappers Bridge – as last month. Nitrate levels were low to moderate with the exceptions of Spatham Lane, Streat Lane and Clappers Bridge. Values for turbidity, pH and conductivity were normal at locations other than at Ditchling Cemetery, although turbidity readings were, again, higher below Novington Lane. The higher conductivity at Ditchling Cemetery is harder to explain but is probably associated with the extremely low flow conditions at the site.

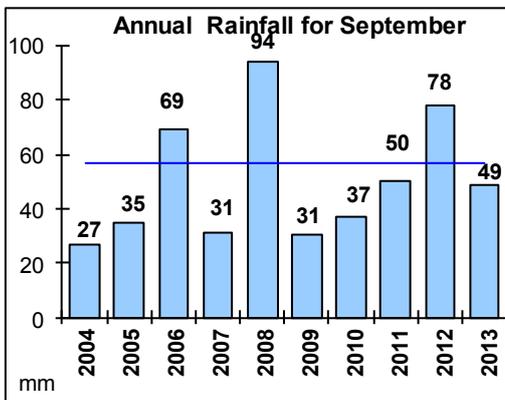
Sites A to D showed a similar pattern to the Sept results with high values for nutrients at Spatham Lane and Streat Lane, and at the high end of moderate at Plumpton Green. The topmost site despite very little flow had low to moderate values for nutrients. The site at Plumpton Green had significantly less ammonia than in September but a similar level of phosphate.

Sites E to H had high or very high phosphate levels – it was disappointing to see such a high level as 10 mg/litre in Plumpton Mill Stream. High phosphate levels at Hurst Barnes and Bevern Bridge are also quite unwelcome because this is the most consistent site for sea trout spawning in Bevern. The other nutrient were mostly low to moderate, although ammonia was a little high at Novington Lane and dissolved oxygen on the low side of moderate at Bevern Bridge. Sites I to L also had very high levels of phosphate and moderate to high levels of ammonia. Phosphate levels were fairly constant along the four sites but ammonia was noticeably higher at Beam Bridge. Dissolved oxygen values were low at Clappers Bridge, on the low side of moderate at Beam Bridge and moderate at Holmans Bridge and Redbridge weir. Nitrate levels were very low at Holmans Bridge but high at Clappers Bridge and at the high end of moderate at Redbridge Weir and Beam Bridge.

So yet another set of poor results this month, dominated by very high phosphate levels and very low flows. A careful look through the results suggests that there are more nutrient sources than the two WwTWs on Bevern Stream and manure pile(s) on Plumpton Mill Stream, but it is likely that phosphate is persisting further downstream due to the very low flows experienced for the past few months. Moreover, the low flows will 'magnify' the effects of minor inputs of nutrients, not usually visible. However phosphate levels in Plumpton Mill Stream and along the section downstream from Novington Lane to Holmans Bridge are especially unwelcome during autumn because these are all prime locations for sea trout spawning – now only several months away.

The results of our tests are updated every month and published on our website - [www.oart.org.uk/waterquality/monthly-report.htm](http://www.oart.org.uk/waterquality/monthly-report.htm)

## Rainfall Measurement for September 2013



### Observations

Rainfall in September was 48.5 mm, very similar to last month and below the monthly average of 56.9 mm.

This has increased our deficit over the last four months to 71.5 mm (212.6 - 141.1).



### Green Woodpecker *picus viridis*

First recorded in Anglo Saxon times

UK Conservation Status—Amber

Approx 52,000 pairs (summer).

Habitat—deciduous and mixed woodland edges, scrubland, gardens and lawns.

Food—mostly hunts ant nests and feeds on the ground but also finds beetles and caterpillars.

Tongue—10cm long with barbs on the end used for extracting ants. It is so long it has to be curled around its brain.

Length—32 cm

Clutch size— nests in hole in tree and lays 4-6 smooth white eggs

Incubation 19-20 days Fledge 21-24 days

Flight—undulating

Call—noisy and mocking





# Ouse & Adur Rivers Trust

**Chairman**

**Dr. Hew Prendergast**

Spylaws, Wych Cross, Forest Row, East Sussex, RH18 5JP

[hew.prendergast@btinternet.com](mailto:hew.prendergast@btinternet.com)

**Membership Secretary**

**Neil Pringle**

[neil.pringle@oart.org.uk](mailto:neil.pringle@oart.org.uk)

Little Knowlands, Spithurst Road, Barcombe, Lewes, BN8 5EF

**Field Officer**

**Jim Smith**

15, North Fields, Isfield, Uckfield, TN22 5XN

01825 750366

**Editor**

**Val Miles**

[va.miles@btinternet.com](mailto:va.miles@btinternet.com)

**WWW.OART.ORG.UK**

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