

An update on The Anglers Monitoring Programme in the Thames region, South East area.

Following the official launch of the 'River Invertebrate Monitoring for Anglers' scheme at the Riverfly Partnership conference in May 2007, there are now an increasing number of groups monitoring the health of the river invertebrate populations in their rivers.

Monitoring in our area (Thames, South east) however has been well established for a number of years prior to the official launch of the scheme. Monitoring on the River Wey in Surrey has been happening for a number of years as part of the pilot scheme for the anglers monitoring programme. The success of this initial pilot study then led to monitoring being extended to other catchments, specifically the rivers Tillingbourne and Loddon. As a consequence the data sets collected from these rivers are becoming quite substantial and are providing useful baseline data on which the future monitoring of existing and new sites in these areas can be based.

As part of the Riverfly Partnerships initiative a successful network of workshops has now been set up country wide (led by Cyril Bennett in England, Dai Roberts in Wales and Craig Macadam in Scotland) in order to provide training to anglers, river keepers and land owners in the identification of the invertebrate groups that go to make up the Angler's Monitoring Index (AMI). These workshops have been attended by and provided training to many individuals and groups in our area. Many of these have gone on to set up their own monitoring group, joined existing monitoring groups or at the very least carried out ad-hoc monitoring on the stretches of river they fish, helping to give a greater understanding of the health of river invertebrates in their area.

The aim of this document is to keep monitoring groups in this area up to date with new developments in the monitoring programme as a whole as well as making individual groups aware of the monitoring, successes and results that are occurring elsewhere around the Thames region South East area.

Updates to the anglers monitoring imitative.

Training – As mentioned previously the network of training days has been extended nation wide to provide the training required in order to get monitoring groups up to

speed with identification and data collection techniques. Consequently training is now very consistent country wide.

Data storage has been streamlined by the production of specific data collection spreadsheets. This spreadsheet is available directly from Cyril Bennett or from myself in electronic format. The spreadsheet simplifies the data collection process and also allows the data between sites to be compared very easily. Once the data from a set of monitoring is entered, the data is automatically graphically represented. It is however not obligatory to use this data storage technique and many groups have their own techniques which suit their needs.

In addition to data storage, the way the data is summarised has also been updated. Traditionally data in this area have always been summed up to provide a value which can be compared to the trigger values. This has involved converting the log abundance categories for each invertebrate group (A, B, C etc) into numeric values (1,2,3 etc) and then summing these values. The new technique is exactly the same as this method, except the final value achieved (the overall score) has now been given a name! From now on, this value will be known as the Anglers Monitoring Index or AMI. This value can then be used to compare recorded data with trigger values or other data.

One area of work that monitors may not be aware of is the updates made to the [Riverflies Partnership webpage](#). . The web page has now been updated to include a section about each monitoring group and the sites they monitor. In some cases there is also additional information in this section about the groups themselves such as links to web pages etc. It is worth keeping an eye on to keep up to date with monitoring in our area.

Monitoring in Thames region South East.

River Loddon.

Several members of Gresham angling club attended the flylife workshops in 2006. Following their training, they established 3 monitoring sites on the upper Loddon below Basingstoke and one site on the River Lyde.

The group made strategic use of their monitoring programme to investigate a potential issue that they believed may be impacting the invertebrate population in the stretch of river downstream from one of their monitoring sites. The monitoring site was used as a control site whilst another sample was taken downstream of the potential impact to see if there was an issue. Happily both samples showed that the invertebrate populations at both sites were in good health and there was no issue to be concerned with.

Data collected from one of the sites are presented below (figure 1).

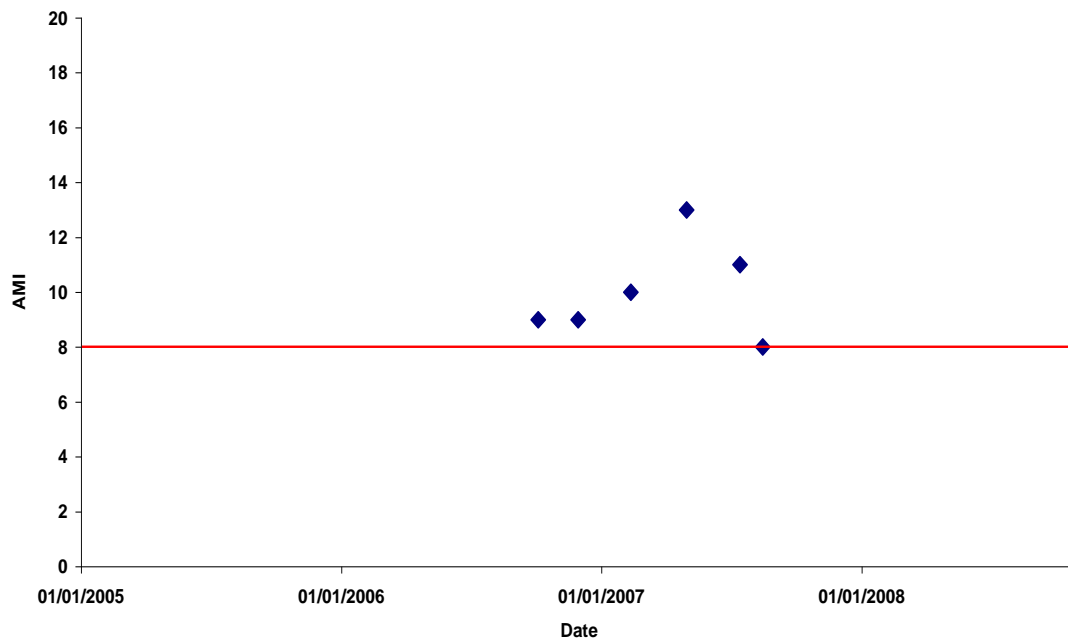


Figure 1. Plot of AMI scores collected at Lodge farm on the River Loddon. Red line indicates the agreed trigger level.

River Whitewater

An angler from Greywell anglers who attended the training course at Leckford in 2006 established a monitoring site on the Whitewater at Greywell. So far, no known issues of concern have arisen from this monitoring.

River Wandle.

In 2007 a group of anglers from the Wandle catchment who attended the Leckford flylife course in 2007 established the beginnings of a monitoring group on the River Wandle in South London. Sadly the monitoring began on the back of a significant pollution incident which did detrimentally affect the invertebrate populations in the River Wandle. Consequently initial data collected from the river achieved very low scores. However data collection has continued monthly since the incident. The monitoring network has also been extended to cover 10 monitoring sites stretching from the source to near the confluence with the Thames. The data set that is building up is providing a very useful set of data that details how the invertebrate community in the river is recovering following this incident. It is interesting to see the processes and changes through which the invertebrate populations go as they recover.

One of the benefits of this data set is that it does provide a useful indication of where the trigger levels need to be set for the different parts of the river in order to detect any future pollution incidents.

An example of the data collected from one of the sites is presented below (figure 2). This site was impacted by the pollution and it is clear to see just how fast invertebrate populations can recover from such an incident.

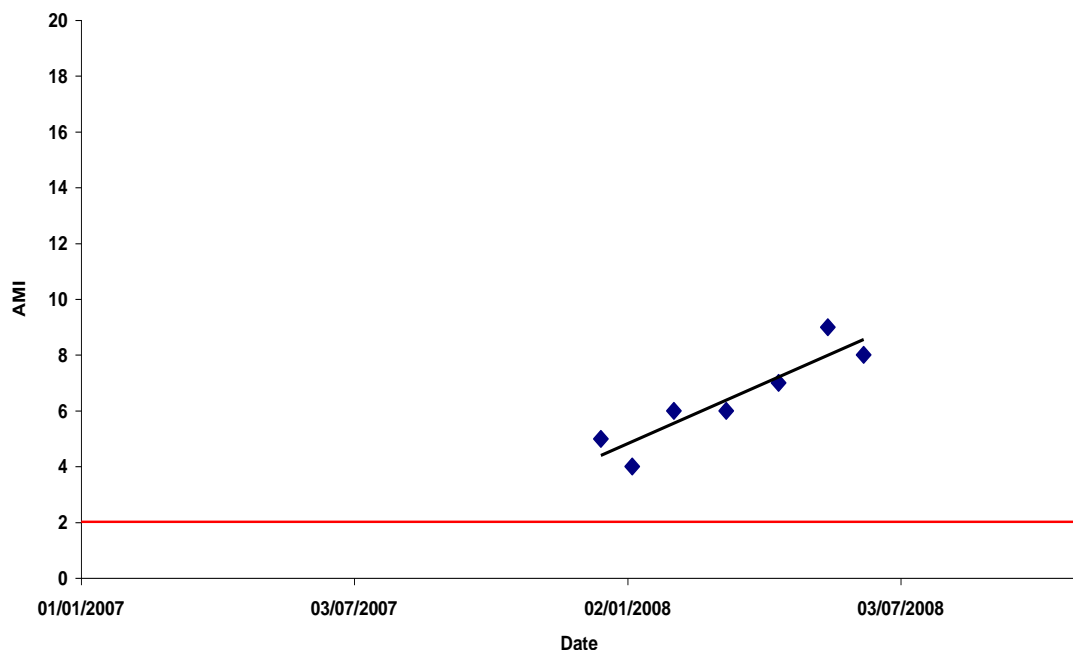


Figure 2. Plot showing AMI from the River Wandle at Morden Hall park. The red line represents the agreed alarm level. The trend line shows the trend in the data following the 2007 pollution incident.

Due to the large size of the monitoring group and the number of enthusiastic volunteers, a training day was set up specifically for the Wandle group. It was carried out on the banks of the River Wandle in March 2008 and was a great success. The result of this large monitoring group is that they are able to monitor 12 sites monthly between them!

River Wey

2 Monitoring groups exist on the river Wey. Frensham flyfishers were at the very forefront of pioneering the anglers monitoring programme and have data sets collected from monitoring over many years. Data sets exist from both sites on the Northern and Southern arms of the river Wey and due to their long time scales provide a very good picture of the health of the upper parts of the Wey catchment. Happily the data recorded from the southern arm of the Wey (figure 3) shows the invertebrate populations are in a much healthier state than they were in the early 2000's when the Southern arm of the river way suffered from two insecticide pollutions. The group are also hoping to start monitoring a new site immediately below the confluence of the two rivers, starting later in the year.

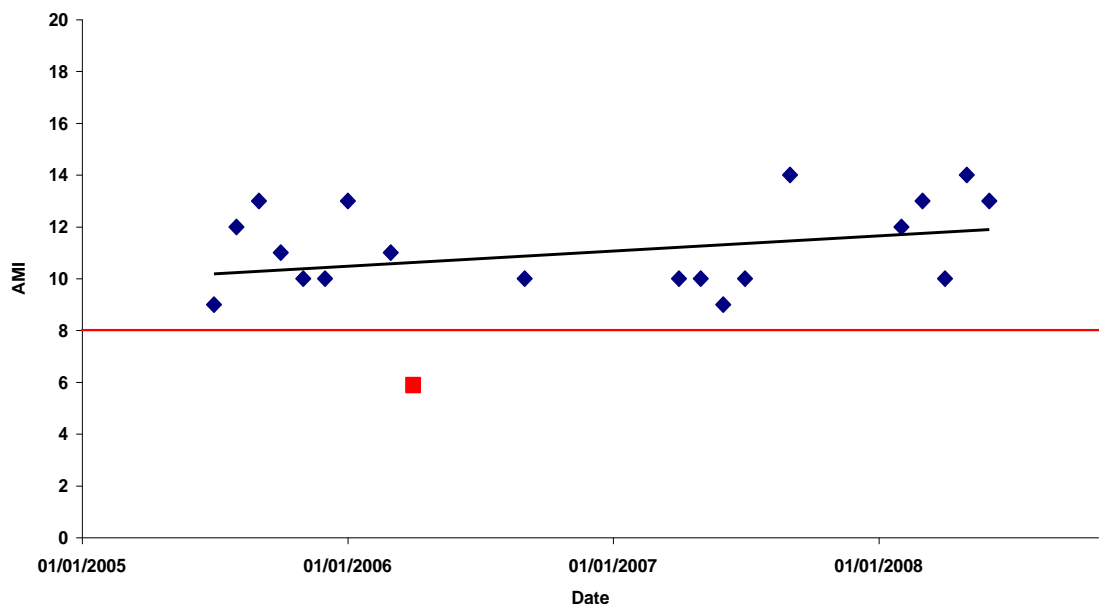


Figure 3. Plot showing AMI from Home farm on the River Wey. The red line depicts the agreed alarm trigger level. The trend line depicts the trend through the data.

The second monitoring group on the river is formed by Pepper Harrow angling club. They monitor three sites on the river Wey lower down in the catchment. The data collected by the group show, like the data from the Frensham Flyfishers further upstream, that the invertebrate populations in the river are in good health. The group have been able to use their data to establish that the habitats in the river are very variable. One of the monitoring sites showed a significant change in habitat over the winter period when no sampling is carried out. On recommencement of sampling in the spring, there had been a significant deposition of sand over the bed of the river had caused a large shift in the invertebrate community, away from those families normally associated with a gravelly site as was found previously. The aggregation of sand at the site was perfectly natural (given the sandy nature of the river Wey) and not due to an illegal discharge of sediment into the river, so the sample site was relocated in an area of appropriate habitat. However this case did show the invaluable nature of the data and shows how effective the scheme can be at detecting other forms of pollution that may occur like release of sediment as well as the more traditional types organic and insecticide pollutions. An example of the data collected from this site is presented below (figure 4).

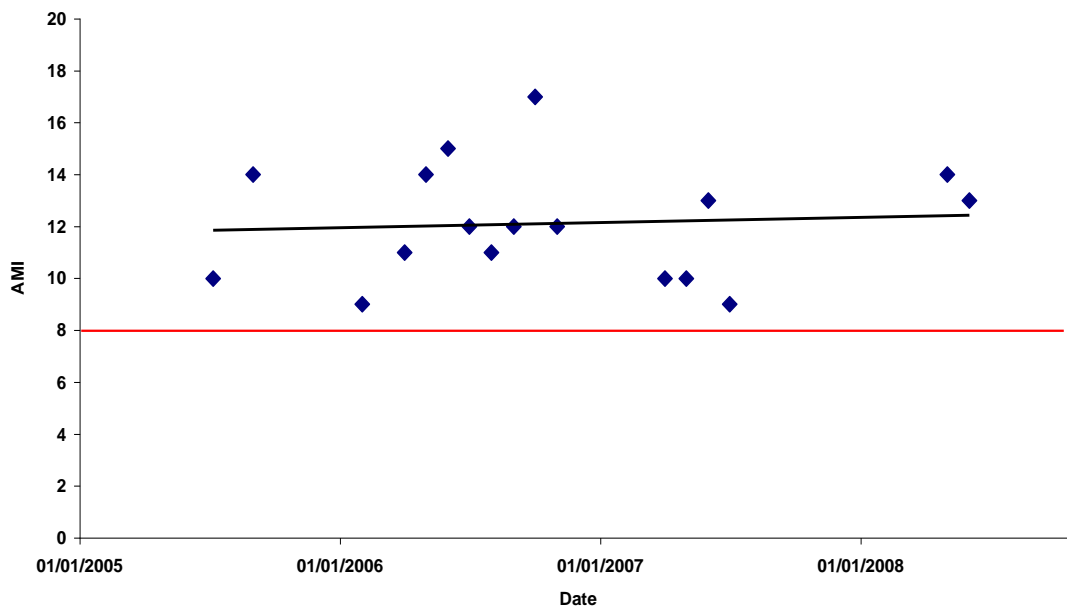


Figure 4. Plot showing the AMI for ‘The riffle’ on the Wey at Pepper Harrow. The red line depicts the agreed alarm trigger level. The trend line shows the trend through the data

River Tillingbourne.

The Albury Flyfishers continue to monitor two sites on the Tillingbourne upstream of Shere. The data the group collects continues to show just how good the invertebrate communities are in the River Tillingbourne (figure 5). A notable success for the group this year is that they have found their first stoneflies! The group have also developed their identification skills further and are starting to identify some of the different types of caddis fly families as well as some of the other ‘non-scoring’ invertebrate taxa they are finding. Albury flyfishers are also helping with the public relation side of the Anglers Monitoring Initiative too. The group hold several days each year for school children where they experience fly fishing. As part of these days the group now also show the school children all the different invertebrates that live in the river. I am reliably informed that many of the children enjoy this activity more than the fishing! In addition some members of the group have given presentations to other groups of people interested in the scheme who wish to establish their own monitoring programmes, and wish to know more about what is involved.

Finally the group have set up a section on [their webpage, www.tillingbourneriverfly.org.uk](http://www.tillingbourneriverfly.org.uk), which details all the monthly monitoring results as well as including some excellent photos of the different invertebrates they are finding. An example of the data they have been collecting is presented below (figure 5)

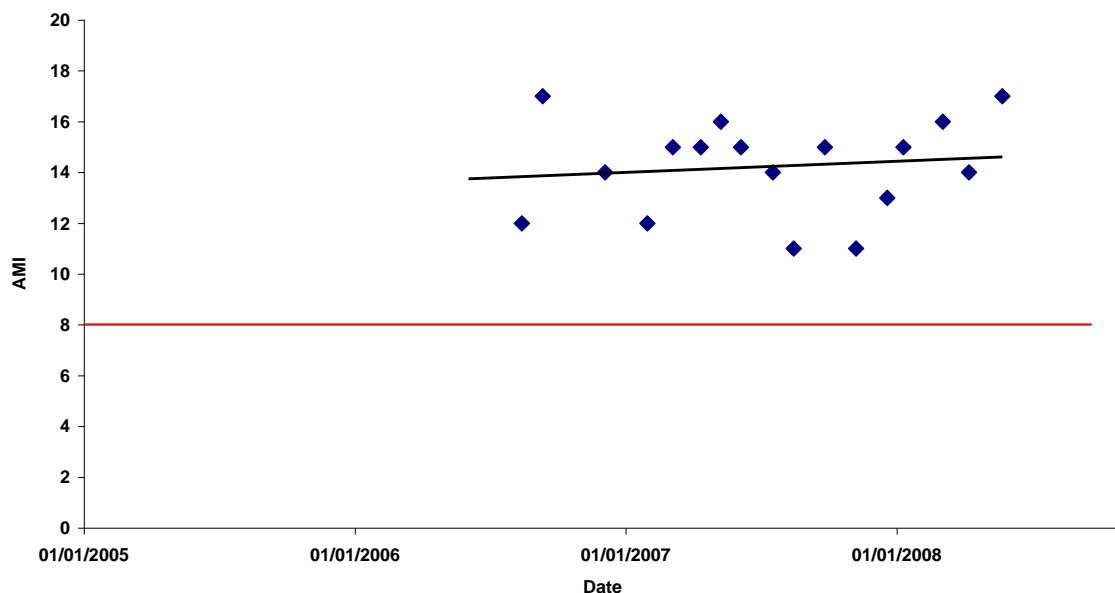


Figure 5. Plot showing the AMI recorded from the middle beat of Albury estate on the Tillingbourne. The red line depicts the agreed trigger level. The trend line shows the trend through the data.

I hope that this update and information about the other monitoring groups will be of interest and use to you all. I am sure that each group would be willing to share any information about the work they have been doing and the data they have been collecting. If you do not have direct contact information for a specific group then please contact me and I will be able to pass your query on to the appropriate contact.

I would just like to take this opportunity to thank you for all your enthusiasm and hard work. The data sets that are being collected by you are vital in helping the Environment Agency to detect pollution events and prosecute those responsible. Without you, our job would be significantly harder, so thank you and please keep up the good monitoring!

Tim Jones

Ecological Appraisal Officer

Thames Region South East Area