

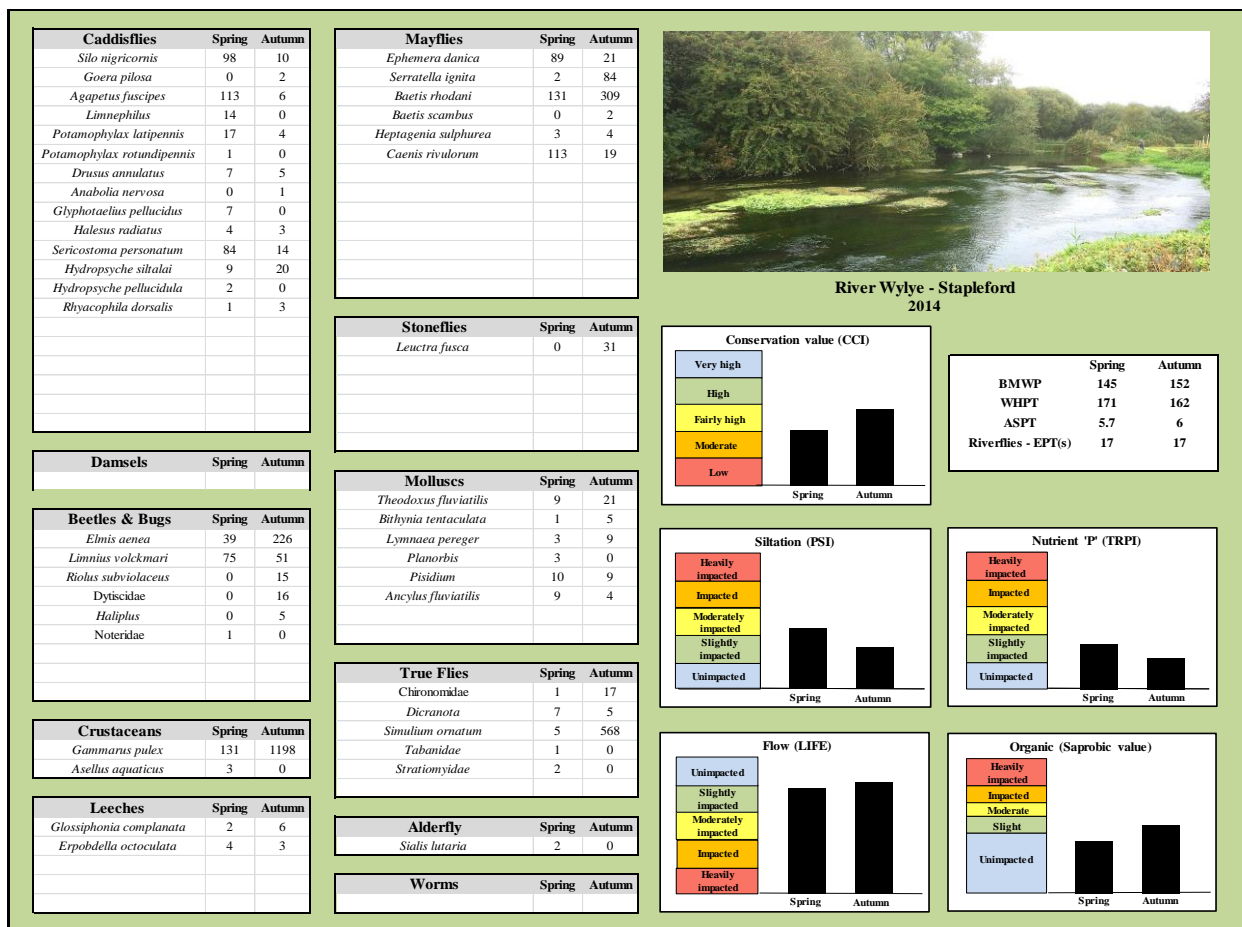
Salisbury & District Angling Club

Centre for Riverfly Conservation

Monitoring water quality – invertebrate benchmarks

Water quality is fundamental to the health of a river and the standard method to measure this is by monitoring the freshwater invertebrates present at each site. This requires a full invertebrate survey and whilst this is normally the responsibility of the Environment Agency, Government funding over recent years has been cut to such an extent that we now have serious concerns that this function will continue on a regular basis.

The Angler's Riverfly Monitoring Initiative (ARMI) is essential to give an early warning of a serious pollution incident, but in some cases this can divert us away from the underlying (and often increasing) problems we are seeing with the water quality of our rivers. Benchmark surveys provide a full invertebrate record of the species present; this can then be passed through biometric software to calculate siltation, phosphate and organic levels, flow rates and conservation values. All of this is displayed on a single page.

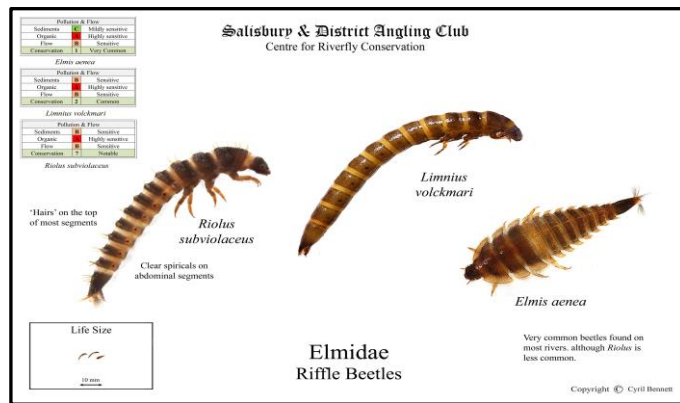
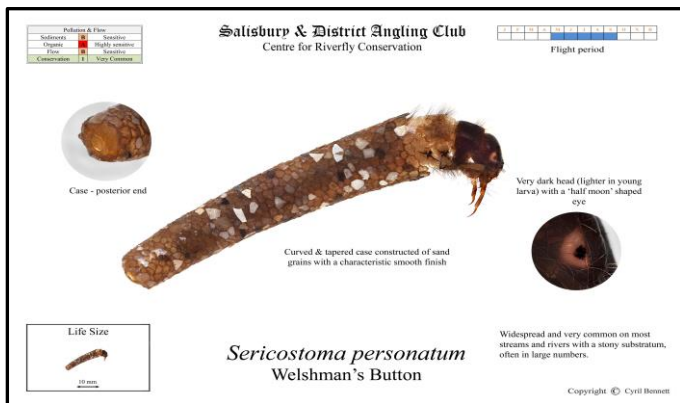


Benchmark Survey for River Wyle

With the ever increasing pressures on our rivers, benchmark surveys are becoming essential if we are to even stand a chance of protecting them; these give a record which can be referred back to if there is a problem. We now have benchmark records in place at numerous sites on the upper Wiltshire Avon which have already aided us in dealing with two serious water quality problems. Salmon & Trout Conservation UK and Aquascience Consultancy have carried out benchmark surveys on other rivers throughout the country which have also highlighted some significant problems. But to allow ARMI groups to use this initiative, we now have in place:

1. App for identification:

To aid identification, high quality digital images have been produced and (with funding from both S&DAC and S&TC UK) developed into the downloadable app "*Pictorial Guide to British River Macroinvertebrate Larvae*". This shows easily identifiable features for each species, plus its pollution fingerprint and conservation value. The app will be continually updated (under our own control) to modify and add new species; all proceeds from the app go towards the conservation of our rivers.



2. Benchmark training course:

By matching each known species at a site (from existing EA data or private survey) against the corresponding image in the app, on-going benchmarks can be produced and maintained by monitoring groups; a highly successful pilot course (with experienced ARMI monitors) has been carried out at the club's headquarters. The 'River Invertebrate Identification & Monitoring' (RIIM) course will now be run at The John Spedan Lewis Trust's field centre at Leckford; the first two courses have been arranged for 29th & 30th April. It is also planned for these courses to be run by the Riverfly Partnership and Aquascience Consultative.



Benchmarking pilot course

3. Water quality:

The assessment of water quality using freshwater invertebrates is complex, but this has been developed into a biometric calculator by Aquascience Consultative. Simplification of data entry means that benchmark data (entered onto the Aquascience website) can be quickly entered to calculate water quality parameters which will then be returned to the monitoring group as shown in the display sheet. This will be at a charge of £85 per sample; £10 of this will be donated to Salmon & Trout Conservation UK.

If we are going to look after our rivers then we need to do it ourselves, and to do that we have to know our bit of river better than anyone else. Whilst the ARMI will detect a serious pollution incident, RIIM takes it a stage further, enabling a full invertebrate species benchmark to be recorded; essential for future reference. If this is then run through the Aquascience Consultancy biometrics, a record of the water quality can also be obtained.

After unanimous agreement from delegates across the country at the Langford Lakes meeting, followed by many thousands of hours of work and support from the Salmon & Trout Conservation UK, John Spedan Lewis Trust, Salisbury & District Angling Club and Aquascience Consultancy - we are now ready to go!