East Yorkshire Rivers Trust

EAST YORKSHIRE RIVERS TRUST Newsletter 11 - July 2017

TRUST APPOINTS NEW CHAIRMAN

A new Chairman was elected at the May 2017 AGM and introduces himself

My name is Paul Coulson and I have worked in, on or around water for all of my professional life. I am a graduate of Sparsholt College, and since leaving those hallowed grounds I have worked for the Environment Agency, private consultants, local government and in education.
I lived and worked in Hampshire for a couple of years before heading back north to take up a position at Bishop Burton College where I headed up the Fisheries Management section for eight years. In that time I helped develop a range of courses from GCSE to BSc level as well as managing the colleges fish rearing facilities. Whilst at the college we had a strong working relationship with the EYRT and our students were involved in numerous projects across the region.

I now work for the Institute of Fisheries Management as their Director of Operations. My day job is quite diverse and involves everything from arranging major international symposiums to running bespoke training courses and representing the Institute on a number of different groups. The Institute is now the largest provider of specialist fisheries training in the UK and a lot of my time is taken up in the design, planning and delivery of these courses.

I am the Chair of the national Fish Welfare Group as well as the local East Yorkshire Fisheries Forum. I am also a member of the British Record Fish Committee (though I can't promise any help if you do catch a record fish from the Hull or the Derwent) and sit on the board of the Sustainable Eel Group. I also have an active role north of the border where I am heavily involved in the development of a new CPD and training programme for the Scottish River Trusts and District Salmon Fishery Boards.

I have been a Director of the East Yorkshire Rivers Trust since November 2009 and in that time I have seen us grow and develop into a Trust that now has responsibilities across the region and not just the chalky bits at the top of the River Hull.

I am, as you may guess, a keen angler and though my time is somewhat limited I do try and get out as much as possible. My fishing is varied though it is mostly on the coarse side of things. I enjoy match fishing on the canals as well as chasing chub and barbel on the rivers when I get a chance. My best catch, however, did come from the West Beck in the shape of a brace of Grayling at 3lb 5oz and 3lb 4oz. These were caught in the traditional fashion of a bunch of maggots underneath a 4BB Avon float!

I would just like to thank Professor Ian Cowx for his great work as Chairman of the Trust over the last few years and I look forward to building on these strong foundations in the years to come.

Finally if you have anything you would like to say about the Trust please do not hesitate to get in touch.

The new EYRT Chairman, Paul Coulson, with a huge Yorkshire grayling

LOTTERY FUNDED
supported by Environment Agency

Thornton Beck Cattle Poaching Project

Thornton Beck is another water body identified within the WFD reports as failing for self-sustaining native fish populations. This moorland beck has suffered for some time from cattle poaching which brings with it all the issues associated with unrestricted access to a water body by stock. Large volumes of suspended solids as well as animal waste has all added to the demise of Thornton Beck at this particular location.

Working in conjunction with Catchment Sensitive Farming officer and the farmer, we have devised and paid for stock proof fencing along the east bank of Thornton Beck for approximately one kilometre. The stock still needed access to the water course as there is no potable water available, so to ensure a safe and effective water access we installed two drinking points. These drinking points have been installed using old concrete railway sleepers to ensure that the stock do not disturb the bed of the stream or the riparian habitat any more than necessary.

Downstream users of the stream have noticed an improvement in the suspended solids and water quality and clarity. It is hoped this will lead to an improvement to brown trout recruitment and address the failings under the Water Framework Directive.

Cattle poaching on Thornton Beck

The stock proof fencing almost completed

Dealing with Invasive Non-Native Species (INNS)

The Trust has been undertaking surveys along our watercourses to identify, map and ultimately deal with INNS on our rivers.

Japanese Knotweed is one of these species that has a minor foothold on the Gypsey Race from the wolds to Bridlington town centre.

Japanese Knotweed can damage structures as it can grow through brickwork and tarmac. It is very difficult to eradicate and can require several treatments.

The Trust has been involved in starting to eradicate this plant so please advise us if you see it by completing the Contact Page on our website: ***www.eastyorkshireriverstrust.org.uk***

The invasive Japanese Knotweed, native to East Asia, it was introduced to the UK in about 1850. It is expensive to eradicate and some mortgage lenders have refused applications on properties where the plant exists

Above: With its aggressive seed dispersal, assisted by river flows, Himalayan Balsam outcompetes native plants. Dieback in winter allows for erosion of river banks

Left: The sap of the invasive Giant Hogweed causes blisters and long lasting scars in humans. Skin contact should be avoided at all costs

Pickering Beck Project

Over the last few years the EYRT have been working in partnership with the EA the PFA and the Butterfly Conservation Trust to address some of the issues affecting this water body. The WFD report highlights the poor self-sustaining fish populations and the Butterfly interest group have highlighted a beleaguered population of the Duke of Burgundy butterfly in the same location. With a grant provided by CEMEX and support from the riparian owner the project has been a great success.

Addressing both issues jointly the EYRT reduced the tree canopy along a two mile length of the Pickering Beck allowing natural light into the forest floor which has encourage substantial growths of native plants that benefit the Duke of Burgundy butterfly, namely Primrose and Cowslip.

The conifer material removed from the trees has been utilised to address erosion issues on this moorland stream as well as adding much needed in-stream habitat to the water body providing clean gravels for native brown trout and refuges for juveniles of both trout and grayling.

Felled conifer used to deflect flow creating a deep scour pool

Marsh Frog

An Alien Non-Native Species

The marsh frog (*Pelophylax ridibunda*) is the largest European frog and is a non-native species in the UK. However, it has become locally common in and around the chalk streams of the River Hull headwaters, due to an accidental introduction back in the early 1980s, being brought over with a consignment of fish from eastern Europe.

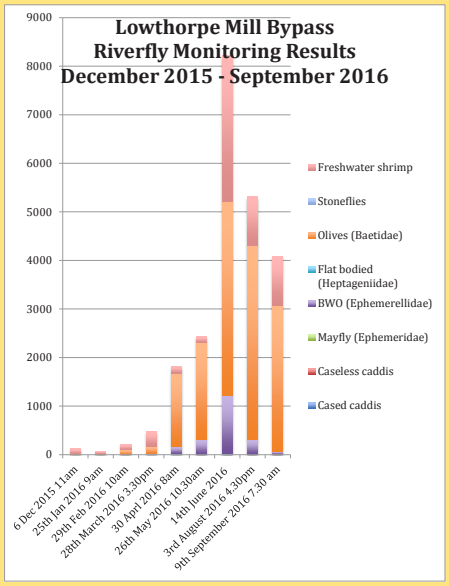
It is highly aquatic and difficult to observe as it dives underwater at the slightest disturbance. If seen it has a warty appearance with a usual dark green colouration. Sometimes it will show a lighter green stripe down its back. It is highly vocal in the breeding season, very noisy and often sounding like ducks 'quacking'.

Two other 'exotic' frogs can be confused with the marsh frog, the pool and edible frog – with the latter a sterile hybrid of the marsh and pool frog. Marsh frogs are often found in ditches and other linear water bodies not strongly associated with our native amphibians and therefore it is unclear how much impact they have. However, as a much larger species than our common frog and toad and a voracious predator, localised negative impacts are likely for our native species.

It was first found in Welland Marsh in Kent in 1935 and is also now found in other parts of the Romney Marshes, East Sussex, Southwest and West London. In the River Hull headwaters it has been recorded along many of the chalk streams and in and around adjacent wetland habitats. It has spread as far south on the river as the Tophill Low nature reserve but has yet to be recorded as far downstream as Pulfin/High Eske.

Foston Beck Lowthorpe Mill Diversion

This comprised an ambitious project to create a new channel around an ancient water mill on one of England most northerly chalk streams. The mill structures were acting as a sediment trap and barrier to fish migration, but this was a sensitive historic site that needed a sensitive approach. The solution was to create 250m of new channel which is fished by the Foston Beck Angling Club, who also monitor the river for invertebrate life. The new section of river has already been colonised by wild brown trout and the number and diversity of rivers flies have increased remarkably quickly. An ambitious project, expertly executed, that is already showing real benefits for trout and other wildlife.



Before (above) and After (below)

Winner of the Wild Trout Trust 2016 Conservation Award for Medium-Scale Habitat Enhancement Scheme

Yorkshire Derwent Partnership

The Trust continued to act as host for the Yorkshire Derwent Partnership in 2016, with Yorkshire Wildlife Trust as co-host. Through a combination of the CaBA hosting money and partner contributions, the Partnership has benefited from a part-time officer during the year. Work has focussed on formally establishing the Partnership, with the appointment of a Partnership Board in July 2016, chaired by an independent member, Jeremy Walker, to work alongside the Delivery Group. Sixteen different partner organisations are now involved in the Partnership and have agreed a shared Vision, set of objectives and governance arrangements, with an over-arching ambition to deliver some projects at a whole catchment scale, particularly in relation to natural flood measures.

During the autumn of 2016, the North York Moors National Park Authority, working with EYRT and other members of the Yorkshire Derwent Partnership, land owners and local communities received a grant of £275,000 from the Heritage Lottery Fund (HLF) through its Landscape Partnership programme. A series of over 20 different projects will cover four themes, Water Environment, Water Quality, Water Level Management and Reconnecting People. The project contributes directly to many of the aims and objectives of the Partnership and was supported with some match-funding from the CaBA hosting funds. The initial grant will enable Ryevitalise to develop its plans and seek final approval for the full grant amount of £2m by October 2018.

The Partnership was also successful in receiving some other funding during the year. Via an application led by North Yorkshire County Council it received £60,000 over two years as a grant from the Regional Flood and Coastal Committee. This money will be used to explore the potential for scaling up natural approaches to reducing flood risk within the catchment and the project will be scoped out in more detail in 2017. EYRT were also awarded just over £10,000 on behalf of the Partnership (including the landowner, Ryedale District Council) to undertake some habitat improvements to restore wet fenland habitat at Norton Ings, a small site located between the River Derwent and the Transpennine railway route.

EYRT and members of the Active Riverfly Monitoring Initiative have continued to carry out river fly monitoring on the Seph to provide an indicative measure of success of the Catchment Partnership Action Fund interventions of last year and to continue to monitor the river. Finally, through ongoing discussions with partners, the Partnership has secured sufficient financial contributions to allow the recruitment of a full-time Partnership Officer, with effect from April 2017. The Officer will continue to develop and implement the Partnership's Catchment Action Plan for the Yorkshire Derwent and a full-time resource will allow more time to be given to taking forward the Partnership's delivery activities. From April 2017, the lead host role for the Partnership will switch to Yorkshire Wildlife Trust, but EYRT will remain a key delivery partner in helping to deliver the objectives for the Yorkshire Derwent Partnership.

Karen Saunders
Partnership Officer

River Seph at Low Crookleith

National Fisheries Improvement - Elmswell Beck

Elmswell Beck is a tributary of the Driffield Trout Stream rising on the East Yorkshire Wolds to the west of the town of Driffield. Like many chalk-fed rivers, Elmswell Beck relies heavily on winter rainfall being sufficient to re-charge the chalk aquifer. When this does not occur the stream dries up in its upper reaches.

The Environment Agency's predecessor, the National Rivers Authority, undertook fish rescues on a regular basis to remove stranded fish. This operation was very labour intensive as access to the rescue areas was only possible on foot. A weir was installed in an effort to hold a suitable water depth and alleviate the need for the fish rescues. The flow patterns on this stream can still be low in autumn, however, the long drought periods of the early 90s seem to have been replaced by a higher average flow pattern.

The East Yorkshire Rivers Trust and partners, the Yorkshire Wildlife Trust, have over the last three years completed a series of stream improvements at the top of the system. This project aims to undertake similar improvements along the lower section.
The main aim started with the removal of the old weir. Its effect on the stream was very damaging in that the overspill was causing scour to the river bed and margins. Following removal of the weir the steel piles were removed off site and the river bed upstream of the structure site was re-profiled and soft material removed. A small machine was used to rake gravels and reinstate the margins. These were overgrown with the invasive reed *Glyceria*. This plant was narrowing the channel; causing erosion and smothering gravels. This project has accomplished improvements over 700 metres of chalk stream. It is proposed that the project site is allowed to naturalise over this coming high flow period. A follow-up visit will be made to check on changes to the stream geomorphology due to removal of the weir. Any further work that is identified at this stage will be programmed into further project bids.

The steel-piled weir before its removal

A mini-digger being used to re-profile the beck and remove invasive weed

Sea Lamprey Potential Spawning Sites

The sea lamprey is a designated feature of the River Derwent Special Area of Conservation (SAC) and the Humber Estuary. After the Environment Agency detected and captured sea lamprey ammocoetes in the River Rye downstream of Nunnington weir in October 2016 a short assessment document was requested to identify locations where the flow, depth and substrate was replicated in other parts of the river where sea lampreys may use as spawning redds.

River Rye at Ryton Bridge

History

In the past 40 years I have observed sea lampreys in the Derwent and Rye on only a few occasions. These have usually been within the main river Derwent; I have never seen them in the River Rye. On a number of occasions I have seen small numbers of sea lampreys spawning downstream of the weirs at Stamford Bridge and Sutton on Derwent. The Barmby Barrage, I presumed, had always had a detrimental effect on this anadromous and rheophilic species as they may be unable to migrate to their spawning grounds through loss of longitudinal connectivity, caused by the barrage.

Walk over Study

The River Derwent, upstream from its confluence with the River Rye, has little if any habitat suitable for sea lamprey spawning until the river runs through the Hackness gorge some 20 miles upstream. Therefore the Derwent catchment was not considered relevant in regards to this study.

Starting the study at the confluence of the two rivers the first potential area that could be exploited by sea lampreys on the Rye is at Ryton Bridge. The second location walking further upstream on the Rye is Newsham Bridge and the third location on the Rye is Butterwick Bridge. There are three further locations but these are on the Rye's tributary, the River Seven. The first is at Barugh Bridge. The second is at Normanby gauging weir and the third on the River Seven is the weir at The Grange near Sinnington Lodge.

All the above locations have characteristics similar to those found downstream from Nunnington Mill. The speed of flow is similar, and the depth and the substrate are all similar to that of the River at Nunnington.

Other locations in the catchment have been considered but for the following reasons have been discounted. Keldholme weir on the River Dove may be considered but the attractant flow from the Dove where it enters the Rye would not be sufficient, in my opinion, to encourage sea lampreys to explore this location. Hodge Beck and the River Riccall both are subjected to episodic periods of drying out and the flow disappears underground.

Costa Beck does not, I believe, have the attractant flow to encourage sea lampreys to enter the system; however, having said that, salmon have been found at the bottom of the Costa system. Therefore the only place where sea lampreys may spawn on this part of the catchment is where the substrate is cobbled at SE 775 / 837. Pickering Beck, which joins the Costa, has more substrate that would be of interest to this species, but the only location that would provide both flow depth and substrate is at Low Mill.

Downstream from Newsham Bridge

Potential sea lamprey spawning site below Butterwick Bridge

Conclusion

The sites highlighted above are similar in flow depth and substrate as that found at Nunnington Mill. In the past I have observed sea lamprey spawning on the Wharfe at Tadcaster, the Swale at Fawdington and the Ure at Boroughbridge. All three of these location have a mixed substrate river bed and open aspect, consistent flow and depth – all the requirements found at Nunnington and replicated at the locations highlighted within this short report.

John C Shannon

Barugh Bridge on the River Seven

Normanby gauging weir on the Seven

Grange weir near Sinnington Lodge

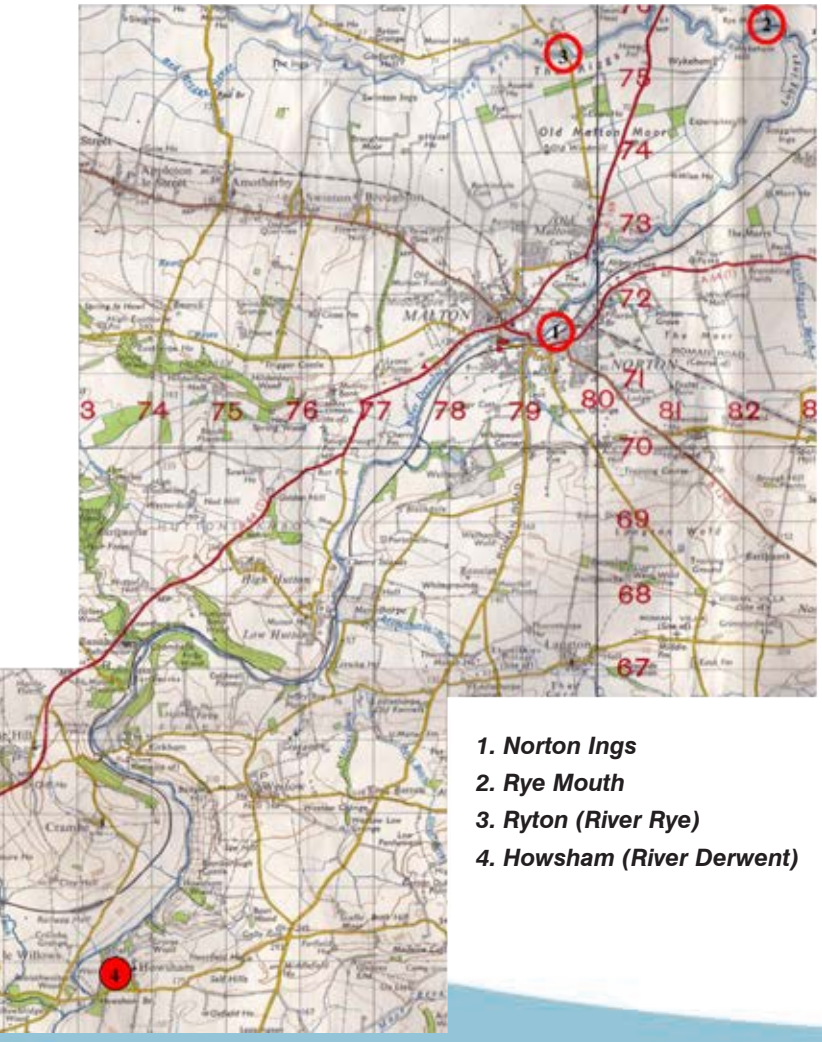
The Scarce Dusky Yellowstreak Riverfly

Electrogena affinis, the Scarce Dusky Yellowstreak river fly, is a rare species inhabiting parts of the Yorkshire Derwent river system, being first recorded in the river at Norton Ings, close to Malton, in 1988 and later in 1994. Having some similarity to the more common Dusky Yellowstreak, identifying a nymph (the nymphs are very small), or adult, of the Scarce Dusky Yellowstreak can be difficult. However, it helps to know the SDY is an inhabitant of small, deep, slack marginal sections with submerged wood and emergent vegetation. It is also be found in midstream faster flowing reaches where there is also emergent vegetation, unlike its nearest, and more commonly occurring 'relative', the DY, which is to be found in the riffle areas of upland streams and rivers. Other features of the nymph also help to identify the species but these generally require the expert help of recorders such as Dr Craig Macadam of the Ephemeroptera Recording Scheme.

Summer 2016 found a small team of recognised authorities on river flies, comprising Craig Macadam, Stuart Crofts (Riverfly Partnership) and Dave Southall (East Yorkshire Rivers Trust), sally forth to various locations in an attempt to discover other populations of this rare aquatic insect. Based on the findings from 2016, the search is on in 2017 to find other sites in the river system that may provide a foothold for such a rare creature in both Yorkshire and Britain.

Dusky Yellowstreak
Electrogena lateralis nymph and adult stages
Found in fast flowing riffle sections of streams and rivers

Scare Dusky Yellowstreak
Electrogena affinis nymph and adult stages
Found in deep, slow, flowing water with abundant emergent vegetation



1. Norton Ings
2. Rye Mouth
3. Ryton (River Rye)
4. Howsham (River Derwent)

Locations of the Scarce Dusky Yellowstreak (Electrogena affinis)

Highlighting Pollution in our Watercourses

In recent decades, a higher proportion of pollution has come from agricultural sources than the first two thirds of the twentieth century. This is a result of a reduction in the amount of effluent coming from industrial sources and human settlements into watercourses, alongside an intensification of agriculture.

Agricultural intensification impacts on water quality through the release of nutrients (as a result of soil management and fertiliser application) and other chemicals (e.g. pesticides). These enter the water environment, through biological contamination (e.g. from microbiological organisms in manure), and via soil being eroded and washed off farmland. In the UK, around 60% of nitrates and 25% of phosphorous in water bodies are estimated to have farming origins and it is thought that 75% of sediments polluting water bodies have derived from farming.

The impact of these pollutants is that currently only 24% of water bodies in England, and 36% of water bodies in Wales, meet 'good ecological status', as defined by the Water Framework Directive (WFD). In Scotland, 65% of water bodies are deemed good or better, but for the 35% which are failing, agriculture is deemed to be a major pressure.

The East Yorkshire Rivers Trust operates a large team of volunteers who regularly monitor the streams in our area concentrating on the invertebrates within our watercourses. Aquatic invertebrates are the best indicators of water quality.

We report any anomalies found to the Environment Agency and work with them to attempt to address the issues.