

The Role of Citizen Scientists in Local River Monitoring. Report from MLG meeting on 06 April 2023.

“Citizen Scientists” have an important role to play in conservation projects for people and wildlife in our area. This was emphasised by Alice Moore, the Volunteering Officer for The Severn Rivers Trust, when she talked to the Malvern Group of the Worcestershire Wildlife Trust at their meeting on 06 April. Volunteers are being recruited and trained to work on the improvement of fish stocks and the monitoring of water quality in the Severn and the Teme.

“*Unlocking the Severn*”, a partnership project funded by the Heritage Lottery Fund and the EU Life Programme, was first discussed in 2011, and sought to restore connectivity on the rivers, allowing fish to move upriver from the sea to their traditional spawning grounds. This had become increasingly difficult because of the construction of weirs and other river flow control measures. Extensive monitoring of Shad fish stocks was an important part of the project and was carried out by local volunteers and Worcester University students. Shad were once more common than salmon in the Severn and used to account for more than 1/3 of the fish caught every year. A member of the herring family, Shad live at sea, returning every year to spawn in fresh water. A programme of work was begun in 2018 to modify Powick Weir on the River Teme, near Worcester, with the construction of “Fish Passes” at Diglis, completed and opened in April '21, and the Holt fish Pass near Tewkesbury, completed in 2022. Work was also carried out on the easement of two weirs.



Diglis Fish Pass



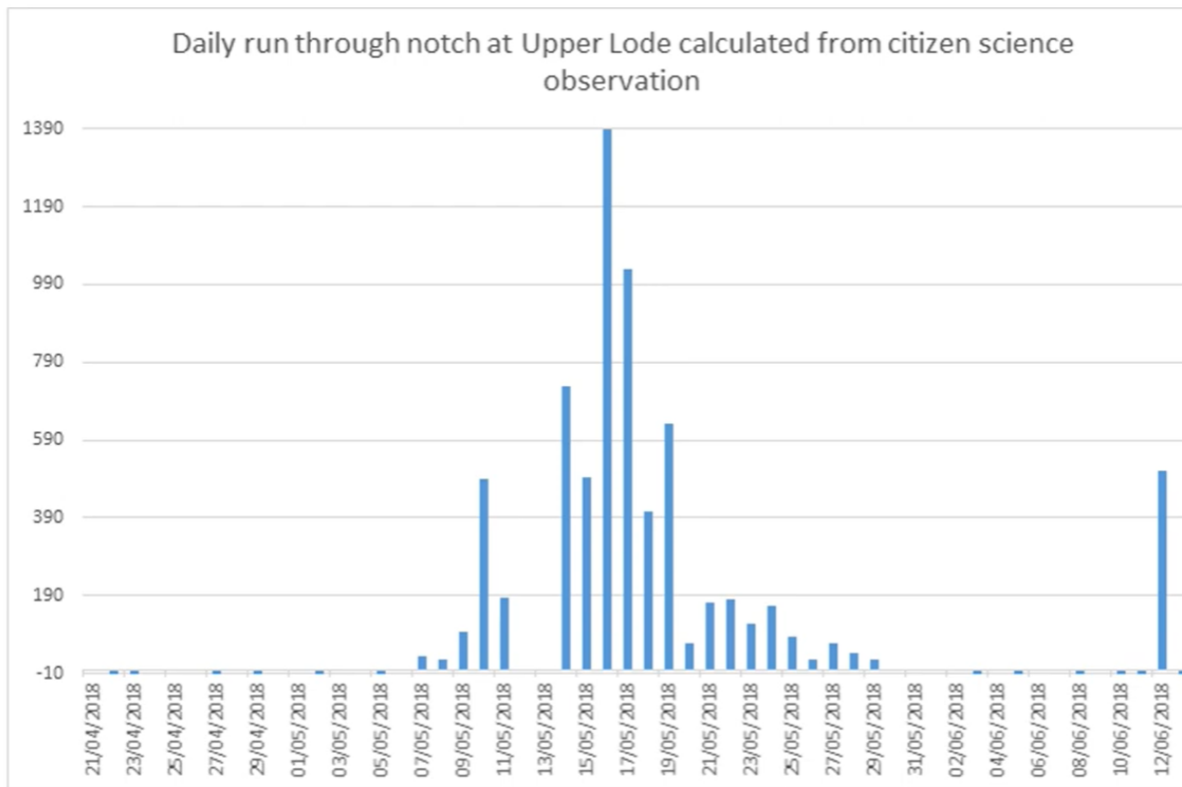
Credit: Laura Bullock

Observing fish migration at Upper Lode Weir

Shad migration observations were carried out at Upper Lode Weir, by placing white boards at passing places, to make the fish more visible and countable. Volunteers recorded data daily from fish runs, and 25 spawning sites were identified. Citizen Scientists also collected valuable data to verify the presence of other species in the Severn - the collecting of genetic material, environmental DNA (eDNA) in water samples, sent for laboratory analysis.



Water sampling



The participation of Citizen Scientists in this project enabled data collection on a much larger scale than would otherwise have been possible, and greatly increased local understanding and appreciation of the shad run and more broadly about fish, river health and barriers to migration.

Water Monitoring on the River Teme Catchment System (River Engagement Project) was also described by Alison.

This is part of a nationwide project sponsored by CaSTCo (Citizen Scientists and the Catchment Thinking Cooperative), Water Breakthrough Challenge and United Utilities (NorthWest Water). The project's aim is to use 'citizen scientists', ultimately, to "improve the health of our rivers".

More than 30 organisations (project partners) were involved in monitoring eight different catchment areas across England and Wales, providing specialist support in various areas of expertise, including supplying monitoring equipment, training and technical support, as well as volunteer coordinators; all working together to have "better understanding and to achieve better management of our rivers".

The River Teme is an important catchment area, providing data on bacterial pollution, phosphate level hotspots, pollution from livestock and sewage outlets. Volunteers have taken part in litter surveys, observing river obstacles, 'outfall' monitoring sites, phosphate testing, river fly monitoring, farm run off and pollution sites

A very important function of volunteers and citizen scientists is the provision of 'robust 3rd party data' is. The data is to fed to water regulators and water companies, and, hopefully, it will give leverage to persuade those bodies to improve the health of our rivers.