

## Feature

# How good is your river?

This autumn, the NGO joined the Riverfly Partnership.

Bridget Peacock explains more about what this means for both parties.

THE RIVERFLY PARTNERSHIP (RP) IS DELIGHTED to welcome the NGO and its members. The RP came together in 2004 in response to the widespread concerns in river water quality and a perceived decline in riverfly life. The network, of more than 50 partners including the Natural History Museum, Environment Agency (EA), Salmon & Trout Association (S&TA) and Rivers Trusts brings together anglers, conservationists, entomologists, scientists, water course managers and relevant statutory bodies to:

- Protect the water quality of our rivers.
- Increase our knowledge of riverfly populations.
- Actively conserve riverfly habitats.

There is great synergy between the RP and the NGO, many of whose members actively manage and conserve the aquatic environment and surrounding landscapes and there are a number of ways that together we can further protect the water quality of our rivers.

### WHAT ARE RIVERFLIES?

The riverflies include three key groups: the mayflies (Ephemeroptera), caddisflies (Trichoptera) and stoneflies (Plecoptera) which are collectively coined 'the canaries of our river systems'. They live as freshwater larvae emerging as adult flies

for the final stage of their life cycle.

Along with other invertebrates, riverflies are at the heart of the freshwater ecosystem and are a vital link in the aquatic food chain. Their common characteristics in the larval stage, of limited mobility, relatively long life cycle, presence throughout the year and specific tolerances to changes in environmental conditions, make them good biotic indicators of water quality and useful indicators of change. Consequently, by monitoring riverfly populations, water course managers and angling (and other interested) groups can play an instrumental role in protecting the health of their local rivers. The riverflies are of particular interest to fly-fishermen as their artificial fishing lures are imitations of these natural flies/fish food.

There is a total of 278 species of mayflies, caddisflies and stoneflies in the UK, of which eight species have Biodiversity Action Plan status and are a priority for conservation by the Government.

### HOW GOOD IS YOUR RIVER?

A river's health is reliant upon its water quality, habitat diversity and flow.

Water quality of a river is, however, all too commonly assumed. The statutory bodies, the EA in England and Wales,

and the Scottish Environment Protection Agency (SEPA) in Scotland monitor the biological water quality of rivers at registered sample sites on a rolling programme, which may involve spring and autumn sampling of a site every three years. River keepers, angling clubs and interested groups are able to monitor their local rivers much more frequently and across a wider area. Working in collaboration, volunteer groups can complement the statutory body scientific framework, adding value and ensuring a regular health check of our rivers.

The RP Anglers Monitoring Initiative (AMI) was launched in 2007, to train interested groups to monitor their local rivers and have an informed dialogue with their statutory body. The methodology involves collecting a three-minute kick sample from the river bed, as used by the statutory bodies, and recording the presence and abundance of seven easy-to-identify groups of riverflies. Monitoring a self-selected sample site takes less than an hour per month. Practising the AMI on your river will:

- Identify falls in water quality and alert the EA/SEPA to further investigation.
- Act as a deterrent to incidental polluters.
- Generate long term biological data for your rivers that can be used to monitor change.

There are now over 40 trained groups monitoring more than 350 self-selected river sites across the UK. The RP wants to see AMI/statutory body collaborations across catchments to help ensure good water quality in our rivers. For further information and to get involved, please contact the RP (see box).

Three case studies show how pollution events first identified by the South East Wales AMI Group have led to successful EA prosecutions of the companies responsible and fines exceeding £40,000.

Left: River keepers are able to monitor their rivers frequently and have a better geographical spread than the statutory agencies.



The critical outcome is that, working in collaboration with the EA, the AMI activity has both identified and halted further effects of pollution. The cause of pollution in the most recent prosecution was run-off from uncovered treated timber stored at a riverside industrial estate. The effective collaboration between the monitoring groups and the statutory bodies is helping to ensure the good ecological status of our rivers as required by the Water Framework Directive. The initiative is commonly cited as an example of best practice in conservation action and the effective partnership of 'citizen scientists' and statutory bodies. But most importantly it's great fun to be involved.

#### NGO MEMBERS TAKING ACTION ON THE TEST AND ITCHEN

River keepers working in the Test and Itchen catchment are taking a lead role in the AMI. The Test and Itchen Association, led by Tom Davies, hosted three one-day training workshops earlier this year at Kimbridge, and now more than 40 sites are being monitored across the catchment by trained river keepers to protect the water quality of these famous chalk streams.

#### YOUR RIVERFLY RECORDS COUNT

Abundant hatches and swarms of riverflies are a wonderful sight and reflect a river in good health. When you see them, do you know what species are hatching?

The RP publishes easy to use guides to the riverfly groups. The NGO has 10 free copies of the fold-out Field Studies Council (FSC) Guide to the adult caddisflies by Peter Barnard and Emma Ross to give away. The first 10 readers to contact Tim Weston (for contact details see page 3) requesting a copy along with their

A grannom hatch on the River Avon.



JOHN LEVELL



COLIN EBDON/RP NATIONAL INSECT WEEK PRIZE WINNER

The upwing fly, *Ephemera danica*, which is common on chalkstreams.

postal details will receive a copy. Riverfly identification courses are held annually by the Freshwater Biological Association and the FSC.

The River Recording Schemes would be delighted to receive your riverfly records to help inform distribution patterns and

Caddisfly, *Philopotamus montanus*.



STUART CROFTS

direct conservation action. The RP will be running a photo competition as part of National Insect Week 2010 – do capture and submit your riverfly images.

#### RIVERFLY PARTNERSHIP

To get involved, please contact the Riverfly Partnership at [www.riverflies.org](http://www.riverflies.org). The Riverfly Partnership operates through the charity status of Salmon & Trout Association, email [info@riverflies.org.uk](mailto:info@riverflies.org.uk) or telephone 020 7929 6966.

Tim Weston is the NGO representative for the Riverfly Partnership. Contact him (see page 3) to receive one of 10 free FSC guides.

