



# Riverfly Biodiversity Action Plan (BAP) Species

Riverflies are at the heart of freshwater ecosystems and are a vital link in the aquatic food chain as a food source for fish and birds. The following eight species of rare and threatened riverflies, have been designated as conservation priorities by the UK Government and are listed on the UK Biodiversity Action Plan (BAP).

## **Northern February red** (*Brachytera putata*)

This stonefly is unusual as it occurs just in Britain making it a British 'endemic' species. In Britain it mainly occurs in Scotland, with a few sites in England and Wales, typically liking rivers flowing through open heath or upland pasture. The adults mainly emerge from the water and fly between February and April. This species is vulnerable to poor water quality, channel engineering works, afforestation with coniferous trees and livestock entering the stream with associated habitat loss, chemical pollution and high nutrient levels.



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## **Rare medium stonefly** (*Isogenus nubecula*)

This stonefly occurs only on the river Dee in Wales and was last found in 1995, unfortunately the species wasn't found during recent surveys and may now be extinct. This stonefly likes large stony lowland streams with bankside trees and vegetation and is likely to emerge from the water and fly between March and April. Threats to this species include pollution (industrial and agricultural); poaching of riverbanks and channel by livestock; unsympathetic engineering works; bankside lighting; it is also vulnerable to floods and droughts because it is so rare.

## **Scarce grey flag** (*Hydropsyche bulgaromanorum*)

The only recent records for the species from the river Arun in Sussex, all other records are over 100 years old. The adults emerge and fly between June and October. Threats to this species include pollution, unsympathetic dredging, siltation, engineering works, abstraction and the removal of marginal vegetation and trees.



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## **Scarce brown sedge** (*Isonychia dubia*)

This caddisfly is known from two breeding sites. This species breeds in streams that dry up over summer but can also be found in permanent streams, rivers and still waters. They have a short flight period from the middle of September to the first week in October. They will live amongst leaf litter so riparian trees are important to this species as well as deep slow pools where this matter can collect. Threats to this species include pollution, unsympathetic dredging, engineering works and the removal of marginal vegetation and trees.



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**Window winged sedge** (*Hagenella clathrata*)

This caddisfly lives in pools that occur on bogs and heathland, and on only 10 sites in the UK. Adults emerge and fly between May and early June in the south and between June and early July in the north. It is very sensitive to trampling and habitat loss from pools drying out when trees invade the pools.



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**Small grey sedge** (*Glossosoma intermedium*)

This caddisfly has been found in only four Lake District streams, however it has been lost at two of the four sites and another is in decline. It is suspected that cypermethrin sheep dips may have been responsible for one disappearance. The adults mainly emerge from the water and fly between April and May. Threats to this species include pollution from pesticides; nutrient enrichment from dams, sewage and farm run-off; siltation and disturbance from drainage works; and shading by afforestation.

**Southern iron blue** (*Baetis (Nigrobaetis) niger*)

This is a widespread mayfly which lives among plants in chalk streams, but this species has declined massively in recent years. This species has a fairly long flight period, with adults in flight between April and October. The decline of this species has been linked to poor water quality due to pollution and inappropriate weed-cutting. Other factors effecting the species include: damage to bank-side and river vegetation, high levels of silt and dredging.



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**Yellow mayfly** (*Potamanthus luteus*)

This mayfly is only found on the river Wye and prefers mobile shingle habitat with larger stones. The adults emerge from the water and fly between May and late October (peaking in July). This species is vulnerable to poor water quality through pollution events, changes in bankside and river vegetation and low flows caused by abstraction. Other factors thought to be contributing to its decline include: suspended silt, dredging, loss of side channels, channels with too much vegetation and excessive bankside light.



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Further information can be found in the species management sheets and species dossiers available in the 'Publications' section of the Buglife website.