

Northern February red

(*Brachyptera putata*)



The Northern February red is a freshwater species endemic to Britain, found mainly in Scottish upland streams. Due to its rarity and decline in numbers this insect has been made a Priority Species on the UK Biodiversity Action Plan (BAP).

The female has three dark bands across its wings, as well as dark wing tips, whilst the male is short-winged and unable to fly.

Like other stoneflies, Northern February red larvae have two tails projecting from the rear of their abdomen which are similar in length to the antennae and typically as long as the main body. The underside of the body is more or less translucent in such that the colour of the gut contents is clearly visible.

Life cycle

The adults typically emerge early in the spring, from February to April. The male is short-winged and unable to fly so, whilst larvae may migrate downstream, the return journey can only be completed by a female.

Distribution map

The Northern February red is endemic to Britain having its stronghold in Scotland, particularly north-east Scotland and the Highlands. Outside of Scotland, this species has only ever been found in two areas – the River Usk in Wales and the Wye near Hereford. As an endemic species, the British population is of international significance.

In Scotland at least, this species seems to be widely distributed where suitable habitat exists.

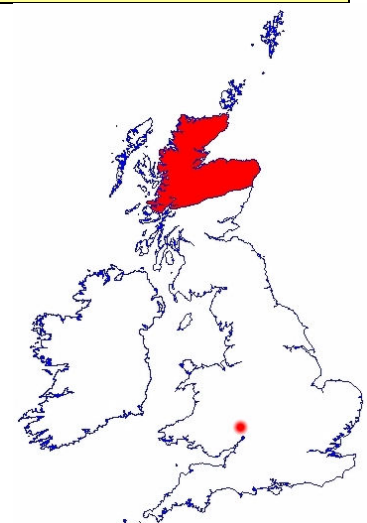


Fig. 1 Generalised distribution map of confirmed records for *Brachyptera putata* in the UK

Habitat

This stonefly thrives best in highly oxygenated, rivers with a shallow or moderate gradient on open heaths or upland pastures. Within this habitat, its larvae are generally found during winter months amongst loose large stones and cobbles, usually below riffles where water flow is moderate. The larvae feed on various species of filamentous algae.

Adults can be found sheltering under stones and on vegetation at the river side including stones on gravel bars and along the banks of the watercourse.

The exposure of riverbanks to winter sunshine is a key requirement of suitable habitat for this stonefly.

Threats and causes of decline

The main threats include:

1. Poor water quality
2. Deterioration of habitat due to livestock entering stream in heavily grazed lowland pasture areas causing disturbance of the riverbed and the potential eutrophication or pollution of the water
3. Channel engineering such as dredging, channel modification or gravel removal
4. Coniferous plantations/afforestation in riparian areas

Habitat management

This species relies upon good water quality therefore the most important management is the maintenance and improvement of water quality. Additional management considerations should include:

- **Protective riparian fencing:** especially in lowland areas; to stop excessive disturbance and pollution from livestock;
- **Ensure exposure of the river and its banks to winter sunshine;** by encouraging deciduous riparian woodland rather than conifer plantations
- **If maintenance and engineering works are necessary, including dredging:** plan them sympathetically to avoid change to river morphology, habitat loss and excessive riverbed disturbance, any habitat loss should be mitigated by habitat enhancements and creation;

Environmental stewardship options

There are a number of options relevant to the protection of this species including:

HLS options

HE9 6m buffer strips on cultivated land next to a watercourse

HLS capital items

FSB/H Sheep fencing

ELS options

EE9-10 6m buffer strips on intensive grassland next to a watercourse

EJ11 Maintenance of watercourse fencing

References

Macadam, C (2011) Species dossier: *Brachyptera putata*, Northern February red. Buglife. Available at www.buglife.org.uk

Middlebrook, I. (2005) Species dossier: *Brachyptera putata* – a stonefly. Action for Invertebrates.



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