

Northern February red

(*Brachyptera putata*)



Left: Larva of *Brachyptera putata*; Right: Female *Brachyptera putata*

The Northern February red is a freshwater species endemic to Britain, found mainly in Scottish upland streams. The female has three dark bands across its wings, and 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 larval body appears translucent, allowing the colour of gut content to be seen. This rare stonefly is a UK Biodiversity Action Plan (BAP) priority species and is a priority for action in the Cairngorms Nature Action Plan.

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

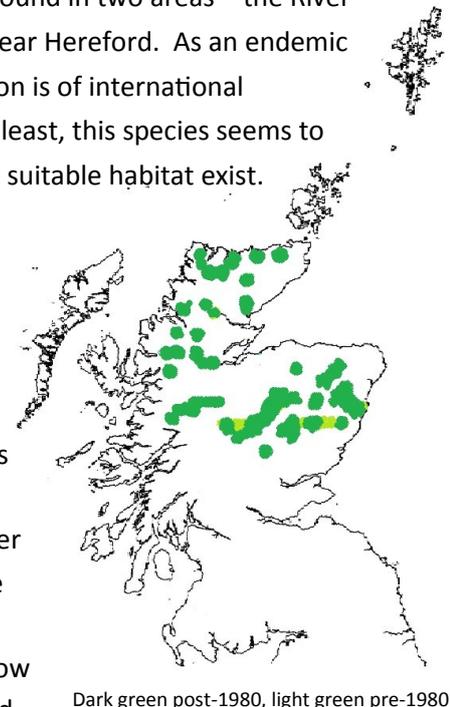
The Northern February red is endemic to Britain

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 exist.

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.



Dark green post-1980, light green pre-1980



Typical habitat: The Clunie Water

Reasons for decline

The main threat facing the Northern February Red is primarily down to poor water quality, leading to the deterioration of its habitat. Poor water quality can arise from livestock entering streams in heavily grazed lowland pasture areas, causing disturbance of the riverbed and the potential eutrophication or pollution of the water. Channel engineering such as dredging, channel modification or gravel removal can also cause unfavourable river conditions. Coniferous plantations in riparian areas could possibly change the nutrient levels of streams and shade the riverbanks excessively more so than deciduous trees.

Habitat management

This species relies upon good water quality, therefore the most important management is the maintenance and improvement of water quality. Other 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.

Survey methodology

- For larvae: Kick-sampling along suitable stretches of river from January—February. This involves using your feet to disturb the riverbed in order to dislodge invertebrates which can be caught using a net a few metres downstream.
- For adults: Sweep netting and hand searching riverside vegetation from February—April. Stones along the river banks should be checked too. Malaise trapping could potentially be used but is not recommended due to by-catch. It is also recommended that a sufficiently experienced ecologist carries out this survey.

References:

This sheet can be accessed on the web at www.buglife.org.uk

Macadam, C (2011) Species dossier: *Brachytera 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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