

New records of the northern summer mayfly (*Siphonurus alternatus* Say, 1824) in Scotland

C.R. Macadam

Buglife – The Invertebrate Conservation Trust,
Balallan House, 24 Allan Park, Stirling FK8 2QG

E-mail: craig.macadam@buglife.org.uk

The northern summer mayfly (*Siphonurus alternatus* Say, 1824) has always been a rare species. It was first recorded in Britain from the River Tummel, Perthshire in 1913 (Mosely, 1931). Subsequent records were made from Dumfries and Galloway (Macan, 1951) and the River Severn (Macan, 1979). The only verified modern records are from the River Dove catchment in the Peak District. However, there are a number of other unverified records of this species (Macadam, 2016). Many of these other records closely overlap with the range of other *Siphonurus* species and in the absence of a voucher specimen these records remain unsubstantiated (Macadam, 2016).

Bratton (1990) noted that a lack of records of this species from the mainland British Isles did not necessarily indicate a “notable species”. However, the paucity of

records in the intervening period led Macadam (2016) to classify this species as “endangered”. Recent recording activity has subsequently confirmed three new sites for this species in south west Scotland: the Drumpail Burn and Long Loch of the Dungeon (Dumfries and Galloway) and Loch Doon (Ayrshire). This now brings the total number of confirmed records from Great Britain to twelve (Table 1). Seven (58%) of these records are from south west Scotland, with a further three (25%) from the Peak District. The remaining records are from the River Tummel in Perthshire and the River Severn in Worcestershire.

Nymphs of this species typically live in deep pools in rivers and streams, but can also be found in calcareous lakes (Kimmins, 1932; Bratton, 1990). The large nymphs are good swimmers and typically swim in short, darting bursts. They feed by gathering or collecting fine particulate organic detritus from the sediment. There is one generation a year, which usually overwinters as eggs and emerges between May and August (Elliott & Humpesch, 2010). Emergence of the adults typically takes place during daylight hours (Elliott & Humpesch, 1983) and males of this species can be found swarming at dawn and dusk over light patches of substrate on the bed of the water body or floating plants such water-lilies (Savolainen, 1978). It is anticipated that future surveys in south west Scotland will turn up further records of this species. All records reported in this note will be made available on the *NBN Atlas* as part of the Ephemeroptera Recording Scheme dataset.

Date	Location	Grid reference	Recorder
<1951	River Cree	-	T.T. Macan
June 1913	River Tummel	-	M.E. Mosely
August 1949	Loch Trool	NX4179	T.T. Macan
2 July 1975	River Severn downstream of Dowles Brook	SO780764	Environment Agency
31 July 1986	River Cree at Cordorcan Burn	NX380709	Institute of Freshwater Ecology
22 June 2010	River Manifold downstream of Ludburn Farm	SK0946362957	N. Everall
7 September 2011	River Dove at Beresford Dale	SK1282358596	N. Everall
24 April 2013	Back Brook upstream of Upper Hulme	SK0141561893	N. Everall
2 May 2016	Loch Doon	NS478006	Marine Scotland
15 August 2016	Drumpail Burn	NX22026330	Envirocentre
10 June 2017	Long Loch of the Dungeon	NX468839	R. Merritt
16 July 2017	Drumpail Burn	NX223621 to NX223649	A. Farr

Table 1. Confirmed records of *Siphonurus alternatus* in Great Britain.

REFERENCES

- Bratton, J.H. (1990). *A Review of the Scarcer Ephemeroptera and Plecoptera of Great Britain*. Research & Survey in Nature Conservation No. 29. Nature Conservancy Council, Peterborough.
- Elliott, J.M. & Humpesch, U.H. (1983). *A Key to the Adults of the British Ephemeroptera with Notes on their Ecology*. Scientific Publications of the Freshwater Biological Association No. 47.
- Elliott, J.M. & Humpesch, U.H. (2010). *Mayfly Larvae (Ephemeroptera) of Britain and Ireland: Keys and a Review of their Ecology*. Scientific Publications of the Freshwater Biological Association No. 66.
- Kimmins, D.E. (1932). British Trichoptera, Ephemeroptera and Plecoptera in 1930-31. *Entomologist's Monthly Magazine* 68, 156-161.
- Macadam, C.R. (2016). *A Review of the Mayflies (Ephemeroptera) of Great Britain*. Species Status No. 28. Natural England Commissioned Report, NECR193.
- Macan, T.T. (1951). The taxonomy of the British species of Siphonuridae (Ephemeroptera). *Hydrobiologia* 3(1), 84-92.
- Macan, T.T. (1979). *A Key to the Nymphs of British Ephemeroptera with Notes on their Ecology*. (3rd edition). Freshwater Biological Association Scientific Publication No. 20.
- Mosely, M.E. (1931). An addition to the known British Ephemeroptera. *The Entomologist* 64, 91.
- Savolainen, E. (1978). Swarming in Ephemeroptera: the mechanism of swarming and the effects of illumination and weather. *Annales Zoologici Fennici* 15, 17-52.