

## A second British site for *Wiedemannia simplex* (Loew) (Diptera, Empididae, Clinocerinae)

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### Summary

Further survey work in the Cairngorm National Park has discovered a second British site for the Endangered Empididae *Wiedemannia simplex* (Loew, 1862).

### Background

The status of *Wiedemannia simplex* (Loew, 1862) in the British Isles was reviewed by MacGowan (2019). During survey work carried out to inform that review six high level lochs in the Cairngorms were visited during the summer of 2018 with *W. simplex* only being detected at one site. The species was only found at Loch Avon, a locality which has historical records of the species going back to the visits of R.L. Coe in 1936 and 1937. Based on the evidence of this survey it was concluded that this was still the only known British site.

### Survey work 2020

As part of a general search for montane Diptera, I made a further visit to Loch Etchachan in the central Cairngorms on 21 July 2020 and somewhat to my surprise discovered a substantial population of *Wiedemannia simplex* occurring along the loch shore. Adults of both sexes were seen in their characteristic situation, just above the waterline on the granite boulders (Fig. 1) along the southern shore of the loch (Fig. 2). Six specimens, 2♂ and 4♀, were retained for the National Museum of Scotland collections. Loch Etchachan lies 1.4km south of Loch Avon, and, at an altitude of 927m, is 200m higher. Loch Etchachan has a surface area of 0.23km<sup>2</sup> and a maximum depth of 20m (Wikipedia a), compared to Loch Avon which has a surface area of 0.43km<sup>2</sup> and a maximum depth of 101m (Wikipedia b).



1



2

**Figs 1-2. *Wiedemannia simplex* at Loch Etchachan: 1, adult; 2, habitat.**

I had previously visited Loch Etchachan (NJ0000) on 26 June 2018, at which time I saw no evidence of this species. That visit was on the same day as I had recorded the species at Loch Avon, which in itself had been the earliest recorded occurrence of *W. simplex*. Previously the species had only been found in July and August with the earliest seasonal date being 13.vii.1936. I can only assume that the emergence of adults at the higher Loch Etchachan had not yet occurred when I visited the site in June 2018. As a result of the 2018 survey, I had concluded that *W. simplex* only occurred in Loch Avon, a deep loch in a narrow glacial trench. I considered that the higher but relatively shallow corrie-lochans were not suitable. However, the occurrence at Loch Etchachan opened up the possibility that there could be further populations in these high corrie-lochans and as a result further survey work was undertaken.

The first site visited on 29 July 2020 was Loch Coire an Lochain (NH9400) which lies at 995m in a north facing corrie just below Braigh Riabhach, some 6km. west of Loch Avon. This is one of the highest, and due to its aspect, one of the coldest water bodies in the Cairngorms but despite an extensive search of the shoreline no specimens were seen. Subsequently on 7 August 2020 I visited Lochan Uaine (NO0098) just south of the summit of Beinn MacDhuibh. This is another high level lochan situated at 950m in an east facing corrie, less than 2km south of Loch Etchachan, but again despite a shoreline search no specimens of *W. simplex* were observed. On a further visit to Loch Etchachan, on 17 September 2020, no adults were seen in the areas where they had been observed in the previous July, probably indicating the adult flight period was over.

## Conclusions

After surveying eight Cairngorm lochs at different altitudes between 2018 and 2020, *W. simplex* has now been found at two sites. This obviously reduces the vulnerability of the species to any possible environmental impacts and with the second site being at an altitude 200m higher than Loch Avon it may act as a buffer against the effects of climatic change. There is, of course, still a possibility that *W. simplex* may yet be found at other localities but with the most obvious sites having been sampled during the flight period, this seems more unlikely. It still remains one of our rarest and most vulnerable British flies and is potentially an important indicator of environmental change.

## References

- MacGowan, I. 2019. In search of *Wiedemannia simplex* (Loew) (Diptera, Empididae, Clinocerinae). *Dipterists Digest (Second Series)* **25**(2018), 179-184.  
Wikipedia a [https://en.wikipedia.org/wiki/Loch\\_Etchachan](https://en.wikipedia.org/wiki/Loch_Etchachan) accessed 1<sup>st</sup> October 2020  
Wikipedia b [https://en.wikipedia.org/wiki/Loch\\_A%27an](https://en.wikipedia.org/wiki/Loch_A%27an) accessed 1<sup>st</sup> October 2020