

Surveying for the Bog bush cricket (*Metrioptera brachyptera*)  
across the carbon landscape mosslands.



Figure 1 - Photo credit, Andy Hankinson

A number of field surveys were undertaken across seven mossland sites within the Carbon Landscape for the regionally under recorded Bog bush cricket *Metrioptera brachyptera* between July and August 2018 to ascertain its presence within the Carbon Landscape moss sites. Which include; Highfield, Astley (SSSI), Little Woolden, Cadishead, Holcroft, Pestfurlong and Risley (SSSI) mosslands were the selected survey sites. Through contacting the Greater Manchester Ecology Unit (GMEU) and the National Museums of Liverpool and Manchester it became apparent that records of the Bog bush cricket *Metrioptera brachyptera* were lacking for the aforementioned sites. It was therefore deemed necessary to ascertain a presence or absence record for the species across the lowland raised peatbogs.

Each site was surveyed by walking a transect of the site, the total transect varied site to site as each survey would ideally cover as much of the site as possible. The surveyor would stop every 60 metres and scan the area with a bat detector moving the between the frequencies.

Of the seven sites surveyed four returned a presence result; Little Woolden, Cadishead, Holcroft and Pestfurlong and three returned an absence; Highfield, Astley (SSSI) and Risley (SSSI). All sites appeared to be of suitable habitat with all containing Purple moor grass (*Molinia caerlunae*) which is vital for egg laying and Heather (*Calluna vulgaris*) which is its primary food source. Astley (SSSI) and Risley (SSSI) have both suffered from historical burning which could explain there being no Bog bush cricket *Metrioptera brachyptera* present. This historic burning would have destroyed the flora that the species requires and would also have burned any eggs that were laid within the Purple moor grass (*Molinia caerlunae*).

Of the forty two individuals directly sighted, all were seen to be on Purple moor grass (*Molinia caerlunae*) as opposed to Heather (*Calluna vulgaris*). Although Heather does exist on all four sites Purple moor grass (*Molinia caerlunae*) occurs in a greater abundance, Cross leaved-heath (*Erica tetralix*) occurs sporadically on both Little Woolden and Holcroft, none were directly sighted on said species. Therefore, it could be a possibility that Cross leaved-heath (*Erica tetralix*) is not a vital species for the Bog bush crickets *Metrioptera brachyptera* lifecycle whereas Purple moor grass (*Molinia caerlunae*) and Heather (*Calluna vulgaris*) are.

### **Summary table of combined results**

<b>Transect Location</b>	<b>Bat detector</b>	<b>Visual</b>	<b>Total</b>	<b>Transect length</b>	<b>*Estimated BBC's per 100m</b>
Astley Moss	0	0	0	0	0
Cadishead Moss	33	1 f	34	1190	2.857
Highfield Moss	0	0	0	0	0
Holcroft Moss	26	21 m 3 f	50	1513	3.304
Little Woolden Moss	12	6 m	18	1753	1.026
Pestfurlong Moss	16	10 m 1 f	27	201	13.432
Risley Moss	0	0	0	720	0

\*Estimate calculated by dividing the sum total of bat detector and visual sightings by the length of transect walked (in m) x 100 (Gardiner *et al* 2010)