

*Chrysomela saliceti* in London

# ***Chrysomela saliceti* Suffrian (Chrysomelidae) - thriving and potentially spreading in urban green areas in London**

***Stephanie K. Skipp*<sup>1</sup>, *Michael F. Geiser*<sup>2</sup>, *James McGill*<sup>3</sup>, *Caroline Nash*<sup>1</sup> & *Stuart Connop*<sup>1</sup>**

<sup>1</sup> Sustainability Research Institute, University of East London, Docklands Campus, London E16 2RD

<sup>2</sup> Department of Life Sciences, The Natural History Museum, London SW7 5BD

<sup>3</sup> 13 Cresswell Avenue, Taunton, Somerset TA2 6LS

*Chrysomela saliceti* Suffrian, (Fig. 1) is a conspicuous chrysomelid recently discovered as new to Britain by Mendel & Hatton (2012). Their record from the Cambridgeshire fens was initially mistaken for the endangered and closely related *C. tremula* Fabricius, which was later corrected to *C. saliceti* in a second publication (Mendel & Hatton 2013). In addition to this record, *C. saliceti* has also been recorded from a site in South Lincolnshire (VC 53) in 2016 (Barnes, 2017).



**Fig. 1** *Chrysomela saliceti* Suffrian, 1851 on its host plant *Salix purpurea* at Queen Elizabeth Olympic Park, Stratford, East London (VC 18 / VC 21).

On 22 May 2018, SC and CN swept a number of *Chrysomela* adults from ground vegetation in the Queen Elizabeth Olympic Park in Stratford (TQ375843, at the border between VC 18 and VC 21) whilst conducting an invertebrate survey. These specimens were given to JM, who identified them as *C. saliceti*. On a further visit to this site on 10 September 2018, SC and CN inspected a nearby row of young *Salix purpurea* bushes, finding both male and female *C. saliceti* adults as well as large numbers of their distinctive black and white larvae (Fig. 2).



**Fig. 2** A larva of *Chrysomela saliceti* beginning to pupate on *Salix purpurea* at Queen Elizabeth Olympic Park (VC 18 / VC 21).

Having been notified of this discovery, SKS visited the site with MFG and Tristan Bantock on 13 and 20 October 2018, respectively, finding very large numbers of *C. saliceti* adults and larvae on the *S. purpurea* bushes. The *C. saliceti* were evidently breeding extensively at this site and some of the host plants were in a state of advanced defoliation.

Another population of *C. saliceti* was also discovered recently in a different urban green area, in the western part of Greater London. On 28 March 2019, Martin Honey (Natural History Museum, London) found numerous adults on young planted willows *Salix* sp. at the London Wetlands Centre in Barnes (TQ226767, VC 17). Three of these specimens were confirmed as being *C. saliceti* by MFG. Voucher

*Chrysomela saliceti* in London

specimens from both Greater London localities are deposited in the British Coleoptera collection of the Natural History Museum, London.

*C. saliceti* is a widespread Trans-Palaeartic species occurring between Spain and the Russian Far East, including Central Asia and parts of northern China (Kippenberg, 2010). Despite its wide range, *C. saliceti* is considered very rare in nearby European countries, with occasional observations of a few large and rapidly breeding populations (Rheinheimer & Hassler, 2018; van Ee, 2012).

Winkelman & Debreuil (2008) listed the species as probably extinct in France, as none had been collected for over half a century. However, Bouyon (2012) noted a population of the species occurring on *Salix repens* in a coastal area not far from Calais, present from at least 1998. This could be a candidate source population for the present discovery. Alternatively, we must consider the hypothesis that the British populations might have been introduced on plants shipped over a longer distance, maybe from Central or Eastern Europe, or even northern China. Queen Elizabeth Olympic Park was established in 2012, with nearly all of its vegetation being planted around that time. This recent planting suggests that this population of *C. saliceti* has most likely been imported with its host plants, rather than being the result of natural dispersal.

It is currently still unclear to us whether the four known British populations of *C. saliceti* all arrived independently from abroad, or whether there has been significant dispersal within Britain. It is possible that individuals from the Olympic Park population have spread around the urban landscape, forming new populations nearby. Likewise, it is possible that young *Salix purpurea* trees from the same nursery had been “infested” with *C. saliceti* before they were planted out in different parts of London, and possibly even Cambridgeshire.

Considering the speed with which it now seems to be breeding, it seems likely that the species will spread further in the near future. Therefore, the authors recommend that local recorders watch out for this species on any patches of potential habitat within London and southern England. Mendel & Hatton (2012) observed that *C. saliceti* will readily feed on aspen *Populus tremula* in addition to *Salix* sp., thus these trees should also be inspected.

### Acknowledgements

We would like to thank Martin Honey for informing MFG about the population at the London Wetlands Centre and kindly passing on the specimens for confirmation. We also thank Howard Mendel and Charlie Barnes for providing the authors with information about the incidence of *C. saliceti* in Lincolnshire, and Maxwell Barclay for helpful suggestions and proofreading our manuscript.

### References

- BARNES, C. 2017. Beetles in 2016. *The Lincolnshire Naturalist* **29**(2): 114.  
 BOUYON, H. 2012. Les *Chrysomela* Linnaeus, 1758 des dunes du Pas-de-Calais (Coleoptera, Chrysomelidae). *Le Coléopteriste* **15**(3): 208-209.

- EE, G. van 2012. *Chrysomela saliceti*, een plaagoptreden in Flevoland. *Sektie Everts Info* **97**: 11-12.
- KIPPENBERG, H. 2010. Subfamily Chrysomelinae Latreille, 1802. Pp. 390-443. In: Löbl, I. & Smetana, A. (eds.) *Catalogue of Palaearctic Coleoptera. Volume 6. Chrysomeloidea*. Stenstrup: Apollo Books.
- MENDEL, H., & HATTON, J. 2012. *Chrysomela tremula* Fabricius (Chrysomelidae) rediscovered in Britain. *The Coleopterist* **21**: 132-135.
- MENDEL, H., & HATTON, J. 2013. Correction: *Chrysomela saliceti* Suffrian (new to Britain) not *Chrysomela tremula* Fabricius (Chrysomelidae) in the Cambridgeshire fens. *The Coleopterist* **22**: 19.
- RHEINHEIMER, J. & HASSLER, M. 2010. *Die Rüsselkäfer Baden-Württembergs*. Karlsruhe: Verlag Regionalkultur.
- WINKELMAN, J. & DEBREUIL, M. 2008. *Les Chrysomelinae de France (Coleoptera, Chrysomelidae)*. Supplément Rutilans 2008.