

## Evidence for breeding lime hawkmoth (*Mimas tiliae*) in Glasgow, Scotland

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The lime hawkmoth (*Mimas tiliae*) is an attractive olive and sand-coloured, medium-sized hawkmoth with a wide distribution in Europe, the Middle East and Asia (Pittaway, 1993). There are two 19th century records of the moth in the Glasgow area: one by John Dunsmore near Houston, Renfrewshire; the other by Robert Dunlop near Kilmarnock, East Ayrshire. Neither is dated, but Dunsmore was active from ca. 1850. These records are cited by Dalglish & Ord (1901) as *Dilina tiliae* and later by Stewart (1915) as *Smerinthus tiliae*. The moth is said to be currently absent from Ireland, Scotland, northern Scandinavia and Arctic Russia (Pittaway, 1993), but there is a general assumption that it is moving northwards in the U.K. (UKMoths, 2020). South (1939) stated that it could be found no further north in England than Yorkshire, and later Hill *et al.* (2010) showed a line from Morecombe Bay to Newcastle as the northern limit. Currently, the NBN Atlas gives the English-Scottish border as its northern limit aside from an “unconfirmed” report on the south Ayrshire coast (NBN, 2020). There was considerable

surprise, therefore, when a mating pair of lime hawkmoths was photographed in Glebe Street, Renfrew, Renfrewshire on 27th May 2016. Whilst publicised at the time on the Paisley Natural History Society website (PNHS, 2020) and in the local press (*Paisley Daily Express*, 20th June 2016), there were no subsequent sightings. Indeed, the possibility was raised that the pair could have been purchased via one of several commercial operators dealing in hawkmoths.

On the late afternoon of 12th August 2019 I found a large green hawkmoth caterpillar on top of a low wall in Orleans Avenue, Jordanhill, Glasgow (Fig. 1). Close examination revealed a blue horn on the tail with a pink blush on the undersurface of the base. The tail also bore prominent yellow warts surrounding a dark red patch. The spiracles were ringed in red and there were seven oblique yellow stripes on the light green body. This was subsequently confirmed as a final instar lime hawkmoth larva.

The caterpillar was found immediately underneath a mature lime tree. I counted 28 such trees in Orleans Avenue, with very substantial numbers (over 100) in that section of Victoria Park which is immediately opposite. It is impossible to say whether the species originally arrived in Glasgow by natural northerly spread or by some artificial means, but the fact that a fully-grown larva can be encountered in these circumstances and close to its natural food-plant is strongly suggestive of successful colonisation. Future light trapping for moths in that area would be of interest.

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**Fig. 1.** Lime hawkmoth (*Mimas tiliae*) larva, Jordanhill, Glasgow, Scotland, 12th August 2019. The caterpillar (left) was 60-65 mm long. Its tail (right) had a blue horn with a pink blush on the undersurface of the base. (Photos: A.P. Payne)

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