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Slender burnished brass moth *Thysanoplusia orichalcea* (Lepidoptera: Noctuidae) in Glasgow, Scotland

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On 5th July 2021, Ardiana Nela found a caterpillar on a basil plant (*Ocimum basilicum*) bought in a supermarket in Glasgow, Scotland. The larva (Fig. 1) was green, ca. 30 mm in length, with two pairs of prolegs, sparse setae, black eyes and true legs, and dark longitudinal markings on the thorax and abdomen. The caterpillar was left in the basil plant and on 6th July 2021 it created a cocoon, which was almost entirely wrapped in two leaves so that the pupa was not visible. This stage lasted 15 days and on 21st July the moth emerged (Fig. 2A). After the fully expanded moth was photographed (Fig. 2B,C), it was released in an enclosed back garden of tenement flats in Kinning Park in Glasgow.



Fig. 1. Slender burnished brass moth (*Thysanoplusia orichalcea*) larva on 5th July 2021, Kinning Park, Glasgow, Scotland. Larva length ca. 30 mm. (Photo: M. Butowska)

After the release, the photographs of the moth were compared with the image record from the Elgood Collection in Wisbech Fenland Museum (Wheeler, 2021). This led to the suspicion that the moth was a slender burnished brass (*Thysanoplusia orichalcea*), based on the colour and shape of the golden L-shaped area covering the central and subterminal regions of the wing. Images of the moth were submitted to Butterfly Conservation and then passed onto RBW in his capacity as moth recorder for Lanarkshire, and he confirmed the moth to be a slender burnished brass.

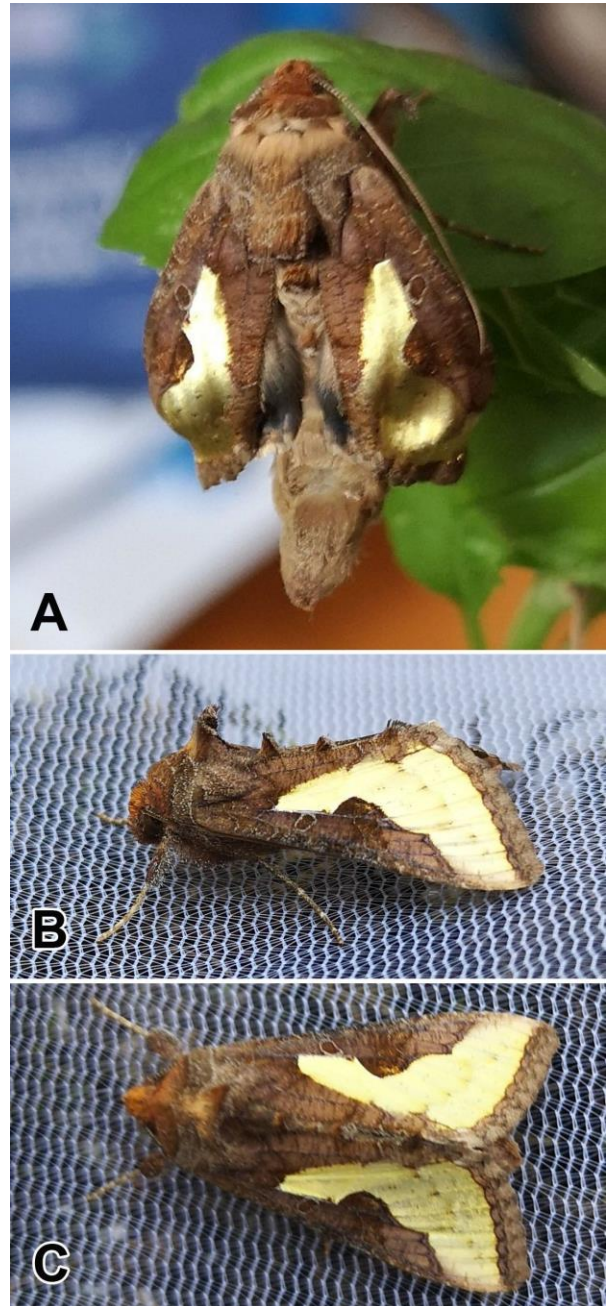


Fig. 2. Slender burnished brass moth (*Thysanoplusia orichalcea*) imago. Kinning Park, Glasgow, Scotland. (A) Shortly after emerging from the cocoon. (B) After the wings of the moth had fully expanded; side view. (C) After the wings had fully expanded; top view. Forewing length ca. 20 mm. (Photos: M. Butowska)

T. orichalcea (Fabricius, 1775) originated in Indonesia but is now widely distributed in the tropics and subtropics of the Old World, and has spread to Europe, Australia, and New Zealand. It is established in much of Africa and potentially around the Mediterranean and on Malta (Stringer *et al.*, 2008; Hill *et al.*, 1987; Waring & Townsend, 2017). In Britain, it is a rare adventive immigrant species, which has been seen fewer than 100 times (Waring & Townsend, 2017), mostly in south and south-west England (NBN, 2021). This is only the

second confirmed sighting of the species in Scotland. The first was by L. Chilvers in July 2020, inside a house in Dunbar, East Lothian (M. Cubitt, pers. comm.). The NBN website (NBN, 2021) is currently showing an “unconfirmed” record of slender burnished brass at the National Trust for Scotland gardens at Poolewe in 2016. This has been found to be a data-entry error for burnished brass (*Diachrysis chrysitis*) and will be amended in due course (D. Watson, pers. comm.).

T. orichalcea is considered an agricultural pest (Stringer *et al.*, 2008) as it feeds on a wide range of agricultural plants, including soybean (*Glycine max*), mint family (Lamiaceae), and various *Brassica* spp. (Hill, 1987). Although the packaging of the basil plant had a “Grown in Britain” logo, the species has not been observed to overwinter successfully or breed in the climate of the U.K. (Waring & Townsend, 2017). Therefore, the Glasgow specimen has likely travelled on produce imported from overseas - potentially Spain as a common source of green vegetable imports to the U.K. The herbs may have then been grown on and packaged in the U.K., or the caterpillar may have moved onto the basil from other produce in transit. The moth was released by itself in an urban area of Glasgow, and therefore was unlikely to find a mate to breed. Nonetheless, sightings such as this are important as they show the ease with which non-native pest species, with a potential to become invasive, can be unintentionally transported and possibly cause economic damage to agriculture, if established.

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