



Where are you from, the Manchester Moth?

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Our knowledge of global species diversity is far from complete. For instance, only about 10% of the real world diversity of insects has been described to date (Samways, 2007). Thus, the greatest taxonomic challenge is to provide unknown species with scientific names before they become extinct. Many birds and mammals, such as the Great Auk (*Pinguinus impennis*), Passenger Pigeon (*Ectopistes migratorius*) and many others, are already known from museum specimens only (see McGhie, 2005, for a list of extinct birds deposited in the Manchester Museum). Unfortunately, teeming diminutive insects have not eluded the same destiny. The International Union for Conservation of Nature and Natural Resources (IUCN) lists 72 insects as extinct worldwide (a highly undervalued figure!). One of these insects is the celebrated 'Manchester Moth' or 'Manchester Tinea' (*Euclementia woodiella*, family Cosmopterigidae), of which a single specimen is available in the Manchester Museum (Fig. 1). It is a tiny, inconspicuous and delicate specimen, with its wingspan of less than one centimetre, of the moth group commonly known as micro-Lepidoptera. The specimen is in a rather poor condition, with most of its legs, right antenna and half of the abdomen missing, and the right forewing is torn apart. The brief story of the Manchester Moth presented here is based on the earlier publications by Sidebotham (1884), Cosmo Melville (1924), Brindle (1952), and a note by an anonymous author (1924).

A series of 50 to 60 specimens of this micro-moth was collected by the amateur collector Robert Cribb from an old rotten tree, apparently an alder (see Sidebotham, 1884), on Kersall Moor (Salford, Greater Manchester) in mid-June 1829. Mr Cribb gave a specimen to R. Wood, a known correspondent of John Curtis, to whom the specimen was to be sent in order to identify it. He also gave a pair of moths to S. Carter. John Curtis, an eminent authority on insects who at that time was working on his monumental eight-volumed '*British Entomology*', identified "this beautiful moth" as a new species (Curtis, 1830: p. 304) and by unknown reasoning dedicated it to R. Wood, not to the actual discoverer. Robert Cribb became so angry that the moth was not named after him that he refused to give another specimen to anyone else.

Many local collectors, the contemporaries of Robert Cribb, tried to recapture the moth but failed, and some of them even accused Mr Cribb of fraudulently passing off a foreign moth as British, which was not true as Robert Cribb had no foreign insects in his possession. Such accusations aggravated the disappointment of Mr. Cribb so that he gave up collecting and nothing would induce him to part with his specimens. Later on, S. Carter offered him money for the box of *Euclementia woodiella*. Unfortunately, the storage box containing the specimens was in pawn at a beerhouse, and by the time Cribb and Carter came to pay the score, the landlady had destroyed the box by throwing it in a fire, in revenge for Cribb's arrears. Since then, nobody else has been able to find any further specimen, and the moth has not been seen alive elsewhere in Britain or in Europe.



Only three specimens of the Manchester Moth survived and exist today: viz., in the Melbourne Museum (Australia), the British Museum of Natural History (BMNH, London, UK), and the Manchester Museum (UK). The specimen kept in Melbourne is the holotype studied by Curtis (see Walker, 2001). Originally, the Manchester Museum owned two specimens of *Euclémensia woodiella*, but in 1927 one of them was exchanged with the BMNH for a large collection of micro-Lepidoptera by the late Lord Walsingham (a total of 2,289 specimens!). According to Sidebotham (1884: p. 53), there was also a fourth specimen of the Manchester Moth which belonged to G. Crozier, a member of the Manchester Natural History Club, but its whereabouts remain unknown.

It is worth noting that while describing the species Curtis (1830: p. 304) clearly stated that he studied a single specimen and it was a female, whereas Koster (2002), who apparently re-examined the holotype, referred to the male only. It may mean that the original series might have contained both sexes. Unfortunately, the specimen kept in the Manchester Museum (Fig. 1) has no abdomen and thus it is impossible to verify the matter:

It is hardly surprising that this Manchester Moth remains an unsolved scientific conundrum. The validity of the name *Euclémensia woodiella* was confirmed by Koster (2002) and others (see Walker, 2001), but the question of where the moth lives or comes from remains completely unanswered. Some scientists believe that this species does not occur outside Britain and is now most likely extinct (Koster, 2002), whereas others (Koster & Sinev, 2003; cited by Lees, 2005) speculate that the species would not have originated from Europe at all. The latter assumption was based on the fact that larvae of North American species of *Euclémensia* parasitize kermes scale insects (genus *Kermes*, Coccoidea), which in Europe are all too minute to support larvae of the Manchester Moth. Whether it is true or not is yet to be discerned, but the origin of the Manchester Moth remains a mystery, as does its disappearance.

As there is no reliable illustration of *Euclémensia woodiella*, we have prepared a reconstruction of the Moth (Fig. 2) based on an examination of the specimen retained in the Manchester Museum, the colour illustrations provided by Curtis (1830: p. 305) and Koster (2002: pl.7, fig. 6), and the general appearance of North American *Euclémensia* species. However, how the Manchester Moth may actually look if it is once more discovered in the wild is unclear, but we expect our



Fig. 1

reconstruction to be an accurate likeness. I believe that the story of Manchester Moth does not end here.



Visitors to the Manchester Museum are able to see the unique specimen of the Manchester Moth kept in the Entomology store, by appointment with the Curator. Besides, there is a special display devoted to the Manchester Moth in the Museum's 'Manchester Gallery'.

References

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