

**RHAGOLETIS MEIGENII (LOEW, 1844) (DIP.: TEPHRITIDAE)
REDISCOVERED IN BRITAIN**

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ON 19 JUNE 2000, I swept a small tephritid fly from dense herbage on "Goose Island", one of three, small, man-made islands on the ornamental lake in London's Battersea Park (O.S. grid reference TQ 2877, VC 17 – Surrey). It worked, in the key by White (1988), to a small and lightly-marked male *Rhagoletis meigenii*, a species thought to be extinct in Britain. According to various works (e.g. Hendel, 1927; Séguy, 1934; White, 1988), this fly breeds in the fruits of barberry *Berberis vulgaris* L., an uncommon and only doubtfully native plant in Britain. A return visit to the island on 6 July 2000 failed to find any further specimens of the fly, or indeed any *Berberis* plants.

Another visit to the island on 17 July 2000 again failed to find either fly or host plant. However, many exotic *Berberis* bushes are widely planted elsewhere in the park's ornamental gardens and from one of these bushes, later identified as *Berberis thunbergii* DC, another *Rhagoletis* was swept. This specimen, a large and strongly marked female, confirmed the identification.

White (1988), Falk (1991) and Clemons (1996) all relate that the only known record of this insect is a single male collected at Lyndhurst, Hampshire, in 1897. Falk (1991) and Clemons (1996) also give an unconfirmed record from Moseley, Worcestershire, in 1908, but both agreed that the fly was undoubtedly extinct in Britain, if, indeed, it ever was a truly established native species. The discovery of two specimens, male and female, on different dates and from slightly different localities must indicate that the insect is firmly, if not well-established, in Battersea Park.

Battersea Park

As an ornamental garden, Battersea Park contains a large number of garden and exotic plants. The Park was created in 1846 when spoil from the newly dug Surrey Docks at Rotherhithe was used to landscape and fill what had previously been the open-aspect Battersea Fields, an oft-cited locality in many Victorian natural histories. In 1854, the carriage drives, lake and several large mounds, which still define the park's landscape today, were laid out. The park was officially opened by Queen Victoria in 1858. It seems unlikely that the fly could have existed undetected in the locality from that date.

The last major horticultural work carried out in the park is likely to have been done in 1950/51, when Battersea Park hosted the pleasure gardens for the Festival of Britain celebrations. Certainly the islands have remained largely untouched for very many years and have overgrown into dense, secondary woodland. At present major "restoration" work is being undertaken to restore the park to something resembling

its original, newly landscaped state. Much new planting has been carried out, but only of waterside and emergent plants along the lakeside. Thinning of some trees has been undertaken on the islands and, in the case of "Goose Island", where the first *Rhagoletis* specimen was found, a large area has been felled to create a sizeable clearing. This area is now shoulder high in new herb growth, largely stinging nettles, sow thistles, greater cabbage and deadly nightshade. No new planting has been carried out on the islands. No *Berberis* appears to have been planted anywhere in the park for many years. The stand of *Berberis* where the second specimen was discovered could have been laid out at any time from the 1960s to the 1980s.

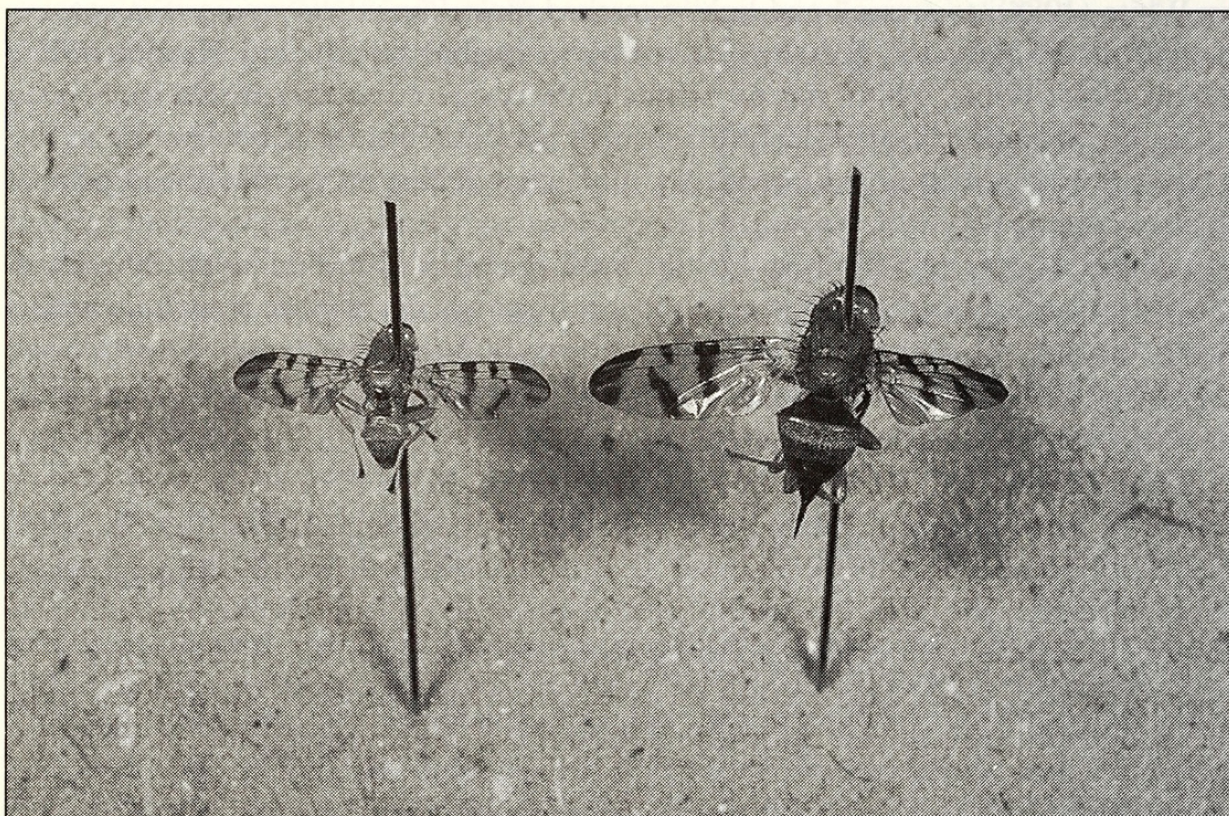


Fig. 1: *Rhagoletis meigenii* (Loew) from Battersea Park, London. Male (left) and female (right).

Origin of the Battersea population

The discovery (or rediscovery) of *Rhagoletis meigenii* in Britain prompts the questions where did it come from, how did it get here and when did it discover *Berberis thunbergii*?

On the Continental mainland, *Rhagoletis meigenii* is known from much of central and northern Europe (Hendel, 1927; Séguy, 1934). Its distribution in Europe and its spread into Britain is most likely to have been constrained by the limited abundance of its natural foodplant. *Berberis vulgaris* occurs throughout Europe, except the extreme north, but is rare in the Mediterranean region (Clapham et al., 1989; Stace, 1991). In Britain it is widespread in hedges, but is everywhere very local. There is no full agreement on its British status; Clapham et al. (1989) suggest that it is possibly native in a few places in England, whilst Stace (1991) reports that it is probably

introduced and anyway is long naturalised here. Ironically, it was probably more common in previous times, having been widely planted for its berries. However, at the end of the 19th century it was blamed by farmers as being an alternative host for a widespread smut on wheat and was vigorously grubbed up. Despite initial scepticism by the scientific and agricultural authorities, the farmers' fears were later proved to be correct. Our "native" Barberry, *Berberis vulgaris*, is widespread, but still very uncommon. However, *Berberis thunbergii* is widespread and abundant. Originally a native of Japan, this tough and thorny bush is now often mass planted in parks and gardens for its spikes of flowers, and later berries. Both the typical green-leaved form and the purple-leaved cultivar *atropurpurea* were planted in the bed where the second *Rhagoletis* was found. Many other *Berberis* species are also planted in parks and gardens throughout the United Kingdom. The 1897 record from Hampshire suggests that the fly can reach Britain either on its own or by some human agency. Situated in central London, Battersea Park and surrounding gardens are full of imported exotic plants and it must be expected that the mass movement of horticultural material will also move invertebrates around too. Battersea Park is already home to a growing band of odd invertebrate hitch-hikers and invaders, including the Australian terrestrial amphipod *Arcitalitrus dorrieni* Hunt (Jones, 1999a), the Australian scarabaeid beetle *Saprosites mendax* Blackburn (Jones, 1999b) and an African ichneumon *Ctenochares bicolorus* (L.) (Jones, in press).

The occurrence of *Rhagoletis meigenii* on *Berberis thunbergii*, a novel foodplant record, suggests that it may have developed a taste for something new. Perhaps this distinctive little tephritid will become well and truly established in Britain this time round.

Acknowledgements

Robert Wells, project manager for the Battersea Park restoration project commissioned the survey of Battersea Park and its islands and arranged access; London botanist Nick Bertrand located and then identified the *Berberis thunbergii* and Ian White of the Natural History Museum re-confirmed the flies' identification.

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***Sarcophaga subulata* Pandellé (Dip.: Sarcophagidae): Probable first record for West Kent and the London area**

On 3.vii.1967, I took a single male of this rare species, probably better known to many as *S. laciniata* Pand., in a shrubbery in my former garden at Blackheath in this district – also a favourite haunt of *S. rosellei* Böttcher in the garden. Van Emden (1954. *Hand. Ident. Brit. Insects*, 10(4a): 113), who provides very useful figures, notes only six records of the present species from four counties, of which that for Kent concerns the eastern vice-county (Ham Street). Laurence Clemons, to whom I am grateful for much information, tells me that this last record (1937) is due to C. J. Wainwright, and that he has himself taken the species in East Kent, on three occasions.—A.A. ALLEN, 49 Montcalm Road, Charlton, London SE7 8QG.

Notes on breeding the Small *Ranunculus Hecatera dysodea* (D.&S.) and the Flame Brocade *Trigonophora flammea* (Esp.) (Lep.: Noctuidae)

Rob Dyke kindly gave me eight pupae of *Hecatera dysodea* obtained from Stone Marshes in Kent at the end of 1998. Five emerged in the summer of 1999 during May, June and July and a sixth emerged the following year on 26 May 2000. Two pupae failed to hatch. Brian Warne was given six pupae by Barry Goater in the spring of 1999. One emerged that year, but the other five hatched during the summer of 2000 giving further evidence that this species can spend two years as a pupa. Whether this is the case in the wild remains to be seen, but it is probably most likely.

On 26 October 1999 I captured a female *Trigonophora flammea* at light at Freshwater, which laid over one hundred ova. Many of these, or young larvae, were distributed to other collectors and I kept about forty for myself. About thirty of these were kept indoors in the hall, by the front door, and they fed up quickly on coarse grasses and buttercup, then finally on privet in the final two instars. The first pupated in March and the first emerged on 19 June 2000. The remaining larvae I kept in the outside greenhouse in the cold. These fed up more slowly and pupated at the end of May and the first of this batch emerged on 15 August 2000. The last to emerge was on 27 September 2000. I had very few casualties and it seems that forcing this species presents no problem. I was successful in breeding them both that way and by keeping them cool in the winter months.—S.A. KNILL-JONES, Roundstone, 2 School Green Road, Freshwater, Isle of Wight PO40 9AL.



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