

# First record of *Drosophila mercatorum* (Diptera: Drosophilidae) in northwestern Europe

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KRAAIJEVELD, A. R., 1992. FIRST RECORD OF *DROSOPHILA MERCATORUM* (DIPTERA: DROSOPHILIDAE) IN NORTHWESTERN EUROPE. – *ENT. BER., AMST.* 52 (3): 32.

**Abstract:** In August 1991 *Drosophila mercatorum* was attracted to decaying kitchen garbage in the city of Leiden, The Netherlands. This species originates from central and southern America and has additionally been recorded from several tropical and subtropical parts of the world. This is the first time the species has been found in temperate regions.

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The *repleta* species group of *Drosophila* originates from the New World. Members of this species group are characterized by having each hair and bristle on the mesonotum arising from a darker spot. A number of species have a wider distribution. Among them are two true cosmopolitan species, *D. hydei* Sturtevant and *D. repleta* Wollaston (Parsons & Stanley, 1986). The only member of this group occurring in northwestern Europe is *D. hydei*.

In August 1991 a tray with decaying kitchen garbage (banana peels, grapes, cucumbers) was put out on the balcony of a 4th floor apartment in the city of Leiden in the western part of The Netherlands. Besides seven drosophilid species that could be expected (*D. melanogaster* Meigen, *D. hydei*); *D. immigrans* Sturtevant, *D. busckii* Coquillett, *D. simulans* Sturtevant, *D. funebris* (Fabricius) and *Scaptomyza pallida* Zetterstedt) at least 30 individuals of *D. mercatorum* Patterson & Wheeler were attracted.

*D. mercatorum* is widespread in the Americas (from the USA through central America south to Chile (Vilela, 1983)). Outside its native area it has been recorded from Hawaii, Kenya, Zimbabwe, Australia, Samoa, India, Madeira, the Canary Isles and, in Europe, in Spain and Portugal (Vilela, 1983) showing its ability to colonize new areas. This is the first time the species is found in temperate regions.

Living specimens of *D. mercatorum* can easily be distinguished from *D. hydei* by the colour of the mesonotum (yellowish-brown

with dark brown spots versus light greyish-brown with dark grey spots in *D. hydei*). In alcohol the colours change and identification must be based on differences in the male genitalia (Vilela, 1983). *D. mercatorum* has about 11 lower and 3 upper bristles on the epandrium (about 23 lower and 5 upper in *D. hydei*); the hypandrium is as long as the epandrium (hypandrium shorter than epandrium in *D. hydei*) and the aedeagus is ventrally expanded, split at the tip and with a serrated posterior ventral margin (*D. hydei* has an aedeagus with a pair of pointed, bent, long spurs and serrated at the tip). Vilela (1983) gives figures and complete descriptions of the male genitalia of all species in the *repleta* group.

Similar traps will be put out in the coming summers to find out if this is an accidental occurrence or if the species has established itself (at least locally) in The Netherlands.

## Acknowledgements

I thank Dr. C. Vilela (Universidade de São Paulo, Brasil) for the identification of *D. mercatorum*.

## References

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Accepted 4.xi.1991.