



A review of the eriophyoid mites (Acari: Eriophyoidea) on *Rubus* spp. in Britain, with a new species (Diptilomiopidae) and two new records

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Abstract

A new vagrant species of eriophyoid mite, *Asetadiptacus acarubri* n. sp., is described and illustrated from *Rubus fruticosus* (Rosaceae) in Britain, a key to the world species of *Asetadiptacus* is provided, and *Anthocoptes rubicolens* Roivainen and *Trimeroptes rubi* Bagdasarian are recorded from Britain for the first time. In addition, *Acalitus essigi* (Hassan) and *Phyllocoptes gracilis* (Nalepa) are reported from *R. fruticosus* and *Rubus* sp., respectively. Collection details, distribution and host plant symptoms are provided, together with digital micrographs of the prodorsal shield and coxigenital region of a female from each species discussed. A review of the other eriophyoid mite species hitherto recorded in Britain from *Rubus* is also provided.

Key words: Eriophyoidea, Eriophyidae, Diptilomiopidae, red berry disease, blackberry, taxonomy, pest, key

Introduction

The Food and Environment Research Agency (Fera) provides an identification service for plant pests and diseases for both the Department for Environment, Food and Rural Affairs (Defra) and commercial customers. During 2009, eleven samples of *Rubus* spp. (Rosaceae) were examined for the presence of eriophyoid mites. This paper presents the findings from these samples: a new vagrant species of *Asetadiptacus* Carmona, 1971 (Diptilomiopidae) inhabiting *Rubus fruticosus* is described and illustrated, with a key to the world species of *Asetadiptacus* and a note on the current classification within the genus is provided; two vagrant eriophyoid mite species from *R. fruticosus* are recorded in Britain for the first time; and recent records of two economically damaging species, commonly found in Britain, are given. A review of the eriophyoid mites hitherto recorded from *Rubus* in Britain, and digital micrographs of the key diagnostic characters, the prodorsal shield and coxigenital region, of a female specimen from each species found, are also provided.

Material and methods

Each sample was examined under a Leica MZ APO dissecting microscope at 10x to 80x magnification. Specimens were initially collected directly from the plant material. Additional specimens were collected by soaking the plant material in 70% ethanol for at least one hour, then passing the solution through black filter paper in a Büchner funnel connected to a tap operated suction pump. The black filter paper was then examined under a dissecting stereomicroscope at x40 magnification and the mites were collected. Initial studies were made on specimens directly mounted into Heinz media (Heinze, 1952) and cleared on a heating block at 70°C. Additional specimens were first cleared in lactic acid and then mounted into Keifer's F-medium (Amrine & Manson, 1996) due to the superior contrast and longevity provided by this mounting medium. The slides were dried at approximately 40°C and then sealed with Glyptal. Specimens were studied, and digitally