

First case report of traumatic myiasis due to association of *Sarcophaga tibialis* (Diptera: Sarcophagidae) and *Lucilia sericata* (Diptera: Calliphoridae)

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Myiasis has been defined as the infestation of vertebrates and humans by dipteran larvae feeding on dead or living tissue, body fluids or ingested food. Traumatic myiasis is caused by larvae infesting pre-existing lesions or actively gaining access to tissues. Fly species that cause traumatic myiasis can be divided into obligate or facultative ones, according to the host-parasite association. Here we describe a rare case of traumatic myiasis in a domestic cat (*Felis catus* L., Mammalia: Felidae) caused by an association of *Sarcophaga tibialis* Macquart (Diptera: Sarcophagidae) and *Lucilia sericata* (Meigen) (Diptera: Calliphoridae). In the summer of 2014 a European shorthair cat was found in San Martino (Ferrara, Italy) with a large wound near the base of the tail and was brought to a veterinary clinic for treatment. The veterinarians found an extensive traumatic myiasis in the wound caused by a high number of Diptera larvae. The collected larvae were raised in the laboratory until emergence of the adults and identified as *S. tibialis* and *L. sericata* based on morphological traits. Myiasis caused by *S. tibialis* in association with another species had been reported only once in 1922, in association with *Sarcophaga crassipalpis* Macquart (Diptera: Sarcophagidae). *Lucilia sericata* has been found in a case of myiasis in association with *Chrysomya albiceps* Wiedemann (Diptera: Calliphoridae) and *Wohlfahrtia magnifica* (Schiner) (Diptera: Sarcophagidae). This is the first report of myiasis caused by an association of *S. tibialis* and *L. sericata*. Only two well-documented cases of cutaneous myiasis in humans by *S. tibialis* were previously reported, both in Tripoli (Libya) in 1913. A poorly documented case of human traumatic myiasis was reported in Algeria in 1922. *Sarcophaga tibialis* is known to cause intestinal myiasis in Europe, but no data are available on the number of cases and localities involved. The present case is the first reliable record of *S. tibialis* causing myiasis in Italy and is probably the first well-documented case of this kind in Europe. Myiasis caused by *L. sericata* have been reported in domestic cats in America, Europe and Asia. Our report is the first one of traumatic myiasis by *L. sericata* in a domestic cat in Italy, albeit in association with *S. tibialis*. Studies on the biology, distribution, and modes of infestation of Diptera causing myiasis in Italy are relevant because accurate and detailed information on these species of medical and veterinary interest is limited. The compilation of an infestation map would be useful for veterinary interventions and for ecological and biological studies.