

# A hairy problem

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## CASE REPORT

An 18-year-old woman presented to our outpatient clinic three days after her return from Playa del Carmen, near Cancun, Mexico, where she had spent her 14-day holiday in a luxury beach resort. She did not have any sexual encounters during her stay. On the last day of her visit, during the first days of her menses, she had anxiously observed small moving objects in her menses secretions in the bath tub sink after washing herself in the hotel bathroom. To ensure the moving, living objects were not residing in the bath, she had cleaned the bath and washed herself again. Once more she observed one or two small black curling and twitching creatures. In the days prior to these observations she had not experienced any itching, local skin abnormalities or vaginal discharge. Notably, she had caught one organism from the bath and stored it in a contact lens container. After her return to the Netherlands she visited her general practitioner, who, after a non-revelatory internal medical examination, referred her to the our travel clinic. Upon physical examination the patient did not show any abnormalities. Visualisation of the deceased organism under a dissection microscope revealed a blackish wormlike insect larva with multiple body segments and rings, protruding hairs and clearly defined head and tail, 6 mm in length and 0.5 mm in width (*figure 1*).

*Figure 1. Larva of Clogmia albipunctata as retained by our traveller (length approx. 6 mm)*



## WHAT IS YOUR DIAGNOSIS?

See page 534 for the answer to this photo quiz.

The organism was identified as a larva of *Clogmia albipunctata* (Williston, 1893) from the *Psychodidae* family, also known as owl flies, moth flies, or moth midges. *C. albipunctata* has been anecdotally associated with human myiasis mainly of the urogenital and nasopharyngeal tracts;<sup>1,2</sup> it has been identified as a hospital hygiene problem<sup>3</sup> and serves as a model for insect embryogenesis. It is a distant relative of insect vectors of various infectious diseases, including cutaneous leishmaniasis. This species originates from tropical and subtropical regions. However, since the mid-1990s, possibly via contaminated export fruit and vegetables and transported by planes and ships, *C. albipunctata* has been demonstrated in Europe.<sup>4</sup> It is a sewage dweller and frequently oviposits in latrines, toilets and more generally in (ecologically) nutrient-rich conditions. The larvae are versatile in their capacity to adapt to living conditions and feed on biofilms in any drain system. To prevent *C. albipunctata* from infesting and ovipositing, toilets and openings of waste pipes should be closed. Regular use of disinfectants is recommendable, as is anti-fly and anti-mosquito netting of bathroom and toilet windows.

The nuisance factor of infestation with *C. albipunctata* is considerable and patients may occasionally present with health concerns or even signs and symptoms of myiasis. In our case, larvae seem to have surfaced from the siphon of the bath tub when our traveller took a bath. Indeed, examination of consecutive menstrual

secretions did not reveal moving living objects and our returning traveller remained free of symptoms suggestive of urogenital myiasis. Nonetheless, awareness of this pest and its possible implications if encountered in a health care setting is recommendable for hygienists, microbiologists and infectious diseases specialists.

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#### REFERENCES

- 1 Samuel MI, Taylor C. An unusual and unsettling place for a worm. *Int J STD AIDS*. 2010;21:524-5.
- 2 Mohammed N, Smith KG. Letter: Nasopharyngeal myiasis in man caused by larvae of *Clogmia* (=Telmetoscopus) *albipunctatus* Williston (*Psychodidae*, *Dipt.*). *Trans R Soc Trop Med Hyg*. 1976;70:91.
- 3 Verheggen F, Mignon J, Louis J, Haubruge E, Vanderpas J. Mothflies (*Diptera*: *Psychodidae*) in hospitals: a guide to their identification and methods for their control. *Acta Clin Belg*. 2008;63:251-5.
- 4 Boumans L. De WC-motmug *Clogmia albipunctata*, een opvallend maar onopgemerkt element van onze fauna (*Diptera*: *Psychodidae*). *Nederlandse Faunistische Medelingen* 2009;30:1-9.