

# New exotic mosquito in Belgium: ITM finds *Culiseta longiareolata*

The sighting of this species can be linked to climate change.

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Dit is de omschrijving

Researchers at the Institute of Tropical Medicine (ITM) in Antwerp have confirmed the presence of the mosquito *Culiseta longiareolata* in Belgium for the first time. The observation of this species can be linked to climate change. This mosquito is not a threat to humans, but it is a potential carrier of pathogens for birds, such as the West Nile virus.

## Monitoring of exotic mosquitoes in Belgium

Due to intensified globalisation, urbanisation and climate change, exotic mosquitoes are spreading more frequently in our regions. They are notorious for their ability to transmit diseases. To reduce potential risks, it is necessary to monitor their presence and behaviour. The ITM team monitoring exotic mosquitoes in Belgium (MEMO project) discovered a new species of mosquito for Belgium between 2017 and 2019: *Cs. longiareolata*. In 2018, they also identified the species *Culex modestus*. These finds emphasise the importance of monitoring exotic and indigenous mosquitoes. The mosquitoes potentially carry pathogens and can indicate climatic and environmental changes.

## Northward migration does not immediately pose a threat to humans

*Cs. longiareolata* originates from the Azores to Central Asia, but it is now also found closer to home. Over the past decade, the mosquito has been spotted more often in western and central European countries, such as Germany, Austria, Slovenia, Switzerland and Luxembourg. However, this mosquito has rarely been observed as far north as in this study. "The confirmed presence of *Cs. longiareolata* in Belgium and the Netherlands was not unexpected," explains Isra Deblauwe, entomologist at ITM. "However," she reassures, "this mosquito has a preference for birds. The risk of mosquito bites is minimal and therefore the risk of disease transmission to humans is also very low."

## Impact of climate change and globalisation

Although we should not fear the bites of this mosquito, the presence of this species may indicate climate change. Rising temperatures and warmer winters promote the spread of this and other exotic species, such as the tiger mosquito, and thus the spread of their pathogens.

"The fact that exotic mosquitoes can exist here is of course related to climate change. However, we must also consider the impact of globalisation. In a single day, we can travel to the other side of the world and back, and there is very little control over what we carry home with us. Not only viruses such as corona, but also insects and other animals. Mosquitoes, for example, enter the country through various routes every day," explains Anna Schneider, research assistant at the Entomology Department of ITM.

In this study, the import of used car tyres, fresh flowers as well as ground and air traffic were mentioned as possible introduction routes of *Cs. longiareolata*, together with their natural spread. "Mosquitoes can be introduced in this way and survive perfectly in this climate," adds Schneider.

## State of the art insectarium

As of 2019, ITM features a new insectarium that houses a wide range of insects, from tiger and malaria mosquitoes to sand flies. The research facility offers extensive opportunities for interdisciplinary work. As a result, tropical diseases, including those linked to climate change and the vectors (animals or organisms that can transmit a disease to another animal or human being) that carry them, can be studied and combated even more effectively.