# Climate change brings invasive mosquitoes and disease risks to the UK



Two species of disease-carrying mosquitoes—Aedes aegypti, commonly known as the Egyptian mosquito, and Aedes albopictus, known as the Asian tiger or forest mosquito—have been detected in the United Kingdom, raising public health concerns linked to climate change. Scientists from the UK Health Security Agency (UKHSA) identified Egyptian mosquito eggs near London Heathrow Airport in September 2023 and found Asian tiger mosquitoes at a motorway service station in Kent in August 2024. Both species, historically associated with subtropical and tropical climates, are known vectors of serious diseases including yellow fever, dengue, chikungunya, Zika, and dirofilariasis.

These findings are part of ongoing surveillance efforts coordinated by the UKHSA, which monitors the presence of invasive mosquito species at high-risk locations such as ports, airports, service stations, and distribution centres. The agency also engages the public through the Mosquito Recording Scheme to report sightings and biting incidents across the country. When invasive species are detected, swift measures are taken to control their spread, including eliminating breeding sites and deploying traps to capture adult mosquitoes.

Research published by the UKHSA and the Centre for Climate and Health Security highlights the increasing likelihood of these mosquitoes establishing populations in southern England due to rising temperatures and milder winters. Urban areas, particularly cities like London, are becoming more climatically favourable to the Egyptian and tiger mosquitoes, increasing the risk of arboviral diseases such as dengue, Zika, and chikungunya. The study, appearing in the journal Global Change Biology, notes that climate change-driven factors—such as higher temperatures and increased rainfall—create ideal conditions for mosquitoes to breed and expand their range northward from mainland Europe.

Looking ahead, projections suggest that by 2060, the yellow fever mosquito could establish itself in London for between one and four months each year, potentially extending to five months by century’s end. This translates to a growing seasonal risk of mosquito-borne diseases as climate warming continues. Additionally, the recent detection of West Nile virus in UK mosquitoes—though without evidence of human transmission så far—underscores the expanding threat posed by vector-borne diseases under changing environmental conditions.

Government health officials and scientists stress the importance of enhanced surveillance and preparedness to mitigate these risks. The UKHSA Advisory Board, in its July 2025 report, called for increased readiness to address emerging environmental hazards related to invasive mosquitoes and the diseases they could introduce. The shifts in mosquito populations and virus prevalence internationally demand coordinated responses to protect public health.

Complementing these measures, innovative biological control efforts are underway in Europe. For instance, a Spanish laboratory is breeding and sterilising thousands of male tiger mosquitoes weekly to reduce populations and curb the spread of diseases such as dengue. Such programmes demonstrate proactive steps that could be considered or adapted for the UK as part of broader strategies against mosquito-borne illnesses.

While these diseases are not currently endemic in the UK, the convergence of climate change, urbanisation, and global travel increases the risk of future outbreaks. Without timely and effective interventions, experts warn the UK faces the real possibility of invasive mosquito populations becoming established, posing new challenges for public health in an era of environmental change.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://www.independent.co.uk/news/uk/home-news/mosquitos-uk-zika-dengue-disease-climate-change-b2837386.html), [[5]](https://news.sky.com/story/two-species-of-disease-carrying-mosquitoes-found-in-uk-13442175), [[2]](https://www.gov.uk/guidance/invasive-mosquito-surveillance)
* Paragraph 2 – [[2]](https://www.gov.uk/guidance/invasive-mosquito-surveillance), [[1]](https://www.independent.co.uk/news/uk/home-news/mosquitos-uk-zika-dengue-disease-climate-change-b2837386.html)
* Paragraph 3 – [[1]](https://www.independent.co.uk/news/uk/home-news/mosquitos-uk-zika-dengue-disease-climate-change-b2837386.html), [[4]](https://www.theguardian.com/science/2025/may/23/climate-change-could-bring-insect-borne-tropical-diseases-to-uk-scientists-warn)
* Paragraph 4 – [[3]](https://www.telegraph.co.uk/global-health/science-and-disease/mosquitoes-yellow-fever-dengue-zika-london-climate-change/), [[4]](https://www.theguardian.com/science/2025/may/23/climate-change-could-bring-insect-borne-tropical-diseases-to-uk-scientists-warn)
* Paragraph 5 – [[6]](https://www.gov.uk/government/publications/ukhsa-advisory-board-meeting-papers-for-july-2025/ukhsa-advisory-board-preparedness-for-environmental-hazards), [[4]](https://www.theguardian.com/science/2025/may/23/climate-change-could-bring-insect-borne-tropical-diseases-to-uk-scientists-warn)
* Paragraph 6 – [[7]](https://www.reuters.com/business/healthcare-pharmaceuticals/spanish-lab-sterilises-mosquitoes-climate-change-fuels-spread-dengue-fever-2024-08-01/)
* Paragraph 7 – [[1]](https://www.independent.co.uk/news/uk/home-news/mosquitos-uk-zika-dengue-disease-climate-change-b2837386.html), [[4]](https://www.theguardian.com/science/2025/may/23/climate-change-could-bring-insect-borne-tropical-diseases-to-uk-scientists-warn), [[6]](https://www.gov.uk/government/publications/ukhsa-advisory-board-meeting-papers-for-july-2025/ukhsa-advisory-board-preparedness-for-environmental-hazards)

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## Bibliography

1. <https://www.independent.co.uk/news/uk/home-news/mosquitos-uk-zika-dengue-disease-climate-change-b2837386.html> - Please view link - unable to able to access data
2. <https://www.gov.uk/guidance/invasive-mosquito-surveillance> - The UK Health Security Agency (UKHSA) coordinates invasive mosquito surveillance to monitor and control species like Aedes albopictus, known vectors for diseases such as dengue, chikungunya, and Zika virus. Surveillance involves setting mosquito traps at high-risk sites, including airports, ports, service stations, and distribution centres. If invasive mosquito eggs are found, immediate actions are taken to prevent their spread, including removing potential breeding grounds and deploying adult mosquito traps. The UKHSA also provides guidance and support to local authorities on conducting mosquito surveillance.
3. <https://www.telegraph.co.uk/global-health/science-and-disease/mosquitoes-yellow-fever-dengue-zika-london-climate-change/> - Researchers have warned that aggressive, disease-spreading mosquitoes could become common in London every summer by the middle of this century. A preprint study predicts that Aedes aegypti, the 'yellow fever mosquito', will establish itself in London for between one and four months a year by 2060, and up to five months by the end of the century. This species is known to carry diseases including dengue, Zika, and chikungunya. The study considers both natural climate variability and human-driven warming in its projections.
4. <https://www.theguardian.com/science/2025/may/23/climate-change-could-bring-insect-borne-tropical-diseases-to-uk-scientists-warn> - Scientists have warned that climate change could bring insect-borne tropical diseases to the UK. The UK Health Security Agency recently detected West Nile virus in UK mosquitoes for the first time, though no evidence of transmission to humans was found. Experts suggest that projected increases in UK temperatures could lead to a fivefold increase in dengue and chikungunya outbreaks by the 2060s. While current risks are low, the warming climate may make the UK more hospitable to insects that transmit these diseases.
5. <https://news.sky.com/story/two-species-of-disease-carrying-mosquitoes-found-in-uk-13442175> - Two species of disease-carrying mosquitoes, Aedes aegypti (the Egyptian mosquito) and Aedes albopictus (the Asian tiger or forest mosquito), have been found in the UK. These species are known vectors for diseases such as yellow fever, dengue, chikungunya, Zika, and dirofilariasis. The UK Health Security Agency detected Egyptian mosquito eggs in a freight storage facility near London's Heathrow Airport in September 2023, and tiger mosquitoes at a motorway service station in Kent in August 2024. Both species are historically linked to subtropical and tropical regions.
6. <https://www.gov.uk/government/publications/ukhsa-advisory-board-meeting-papers-for-july-2025/ukhsa-advisory-board-preparedness-for-environmental-hazards> - The UKHSA Advisory Board has highlighted the growing risks due to environmental hazards, particularly vector-borne diseases, as the climate warms. The detection of West Nile virus in the UK for the first time and the movement of new mosquito vectors, such as Aedes albopictus, northwards through Europe, are of particular concern. The report emphasizes the need for enhanced preparedness and response strategies to address the increasing threat of vector-borne diseases in the UK.
7. <https://www.reuters.com/business/healthcare-pharmaceuticals/spanish-lab-sterilises-mosquitoes-climate-change-fuels-spread-dengue-fever-2024-08-01/> - A Spanish laboratory is breeding and sterilising thousands of tiger mosquitoes to combat dengue fever and other diseases, as climate change encourages the invasive species to spread across Europe. The laboratory releases about 45,000 sterilised male mosquitoes weekly to mate with females, reducing the overall mosquito population. This initiative is part of a broader effort to address the rise in mosquito-borne diseases like dengue, Zika, and chikungunya, exacerbated by climate change.