



VECTOR-BORNE
RADAR

Website: www.vb-radar.com



Project partners annual update newsletter 2025/26

Hello, and welcome to our second annual newsletter! During 2024 VB RADAR was in full swing: we strengthened relationships with wildlife rehabilitation centres; started active sampling of wild passerine birds across southern England; and increased the geographic scope of mosquito sampling. An important part of this newsletter is to thank all the wonderful people (aka you) who have collaborated with us, offering their time, expertise and support to enhance our understanding of mosquito-borne disease in the UK. VB RADAR depends on an engaged network of volunteers who are driven by safeguarding animal health, and we would like to express how thankful we are for your involvement in the project. Our understanding of how mosquito-borne viruses transmit, persist, and impact wild birds is significantly greater through your contributions.

Below we have some highlights and important information from our sampling since the project started, which we wanted to share with you, as we are getting ready for the 2025 mosquito active season (April-November, inclusive). The findings from our combined efforts highlight that Usutu virus is more widespread across southern England than we were previously aware.

Please do get in contact ([Contact | Vector-Borne Radar \(vb-radar.com\)](mailto:contact@vb-radar.com)) if you want to discuss anything about the project. We look forward to working with you over the coming year!

Mosquito work:



Since the start of the project, we have identified over 30,000 mosquitoes from across England to species level; these samples have also been screened for emerging zoonotic viruses that impact wild birds. Through this work we learned that many mosquito species may be involved in transmission of Usutu virus across southern England, and we also identified a previously undetected lineage of Usutu virus circulating in mosquitoes, which suggests a separate incursion of the virus from mainland Europe.

Our mosquito sampling occurs throughout the year, as we look to understand how viruses can persist during our temperate winters. This year (2025) we detected virus RNA in mosquitoes that were overwintering in Greater London, highlighting that Usutu virus can survive our cold winters by hitchhiking a ride in sleeping mosquitoes!

Wild bird work:



Our collaborative work with wildlife rehabilitation centres has focused on screening blackbirds, as these are susceptible to Usutu virus and appear to be undergoing a population decline in Greater London, possibly linked to infection. A handful of our samples tested positive for Usutu virus. Two of these were for previously undetected lineages, suggesting that multiple introductions of Usutu virus into the UK have occurred. This finding highlights the value of expanding mosquito-borne disease surveillance to include rehabilitation centres - a ginormous thank you to all the staff and volunteers involved in this work!

In addition, we have started active surveillance of wild passerines, involving significant collaboration with the British Trust for Ornithology and its network of dedicated bird ringers. Results from 292 sampled birds highlight that a number of species across southern England have been exposed to Usutu virus, and we look to expand this work to screen summer migrant birds this year.

Project goals for 2025:

- (1) Target regions where we have not previously conducted surveillance to understand true geographic distribution
- (2) Undertake active surveillance across southern England for arriving summer migrant passerines, as these may facilitate long distance dispersal of viruses