New Zealand BioSecure

BORDER HEALTH NEWSLETTER

August 2026

NAU MAI, HAERE MAI - WELCOME!

Kia ora koutou katoa,

World Mosquito Day was observed on August 20, 2026, to raise awareness about the dangers of mosquito-borne diseases and commemorate Sir Ronald Ross's 1897 discovery linking mosquitoes to malaria transmission.

In the news this month, have a bit of a refresh on what diseases the three main groups of mosquitoes can transmit, where they will breed, and how to prevent being bitten. This month we also have an update on the West Nile virus situation in Europe, dengue in Nepal, and a very rare circumstance where there have been malaria cases at an airport in Germany. Have you ever wondered why some people are bitten more than others? Have a read of some research from Florida on what *Aedes aegypti*, *Aedes albopictus*, and *Culex quinquefasciatus* find attractive when looking for a meal. Finally, read how citizen science found an invasive mosquito species in the UK.

Happy reading!

SURVEILLANCE

During August a total of 1013 routine and enhanced surveillance, and various survey samples were collected by staff from 12 PHUs (Figure 1). The samples included 50 positive larval samples and 12 positive adult samples, leading to a total of 1107 larvae and 12 adults identified over the past month (Table 1).

Aedes notoscriptus was the dominant larval species both last month (436 specimens) and this month (1094 specimens) and in August 2025 (1411 specimens). For adults, *Culex quinquefasciatus* was the dominant species this both this month (6 specimens) and last month (11 specimens) and August 2026 (11 specimens) (Table 1).

In total, six mosquito species have been collected this month (Table 1), which is two less than last month. Please note that *Culex* sp., *Culex* sp. showing mixed features and *Culex pipiens* complex sp. are not included in this count as they are not considered species *per se*.

Table 1. Adult and larvae sampled by the New Zealand surveillance program during August 2025 & 2026

Species (common name)	Adults		Larvae	
	Aug 26	Aug 25	Aug 26	Aug 25
Aedes antipodeus (Winter mosquito)	-	-	1	-
Aedes notoscriptus (Striped mosquito)	-	-	1094	1411
Aedes subalbirostris (No common name)	-	-	-	1
Culex sp.	1	1	-	-
Culex pervigilans (Vigilant mosquito)	4	5	5	381
Culex pipiens sp. (Common house mosquito)	-	1	2	-
Culex sp. showing mixed features	1	-	-	-
Culex quinquefasciatus (Southern house mosquito)	6	11	2	87
Opifex fuscus (Rock pool mosquito)	-	-	3	85
TOTAL	**12**	**18**	**1107**	**1965**

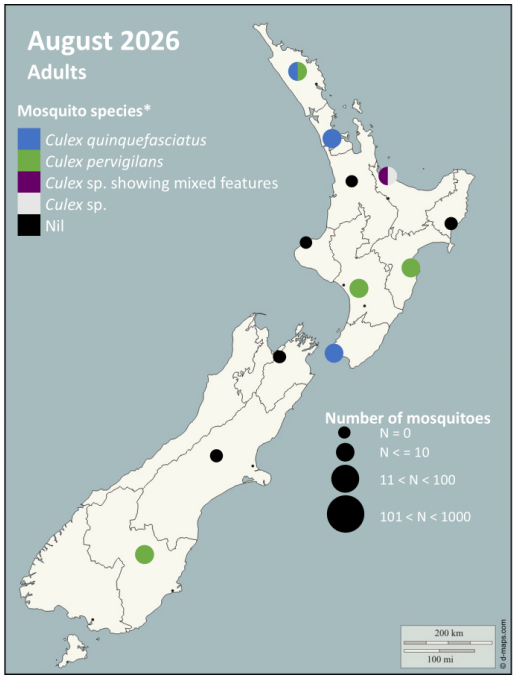
Compared to the previous month, the total numbers of larvae have shown a 75% increase, and the adults have shown a 42% decrease.

Compared to this same month last year, the total numbers of larvae and adults have shown a decrease (44% and 39% respectively) (Table 1).

The highest number of larvae sampled this month (all instars included) was obtained in Northland (988 larvae) followed by Hawke's Bay and MidCentral (40 larvae). Considering only third and fourth instars, the highest number of larvae sampled this month was obtained by Northland (545 larvae) followed by Tairawhiti (15 larvae) (Figure 1).

Nil *Culex quinquefasciatus*, a member of the *Culex pipiens* complex, have been recorded for August in 2025 and 2026 in Southland (Figures 1 and 2). In August 2025 and 2026 nil *Aedes notoscriptus* larvae or adults were collected in Southland.

a)



b)

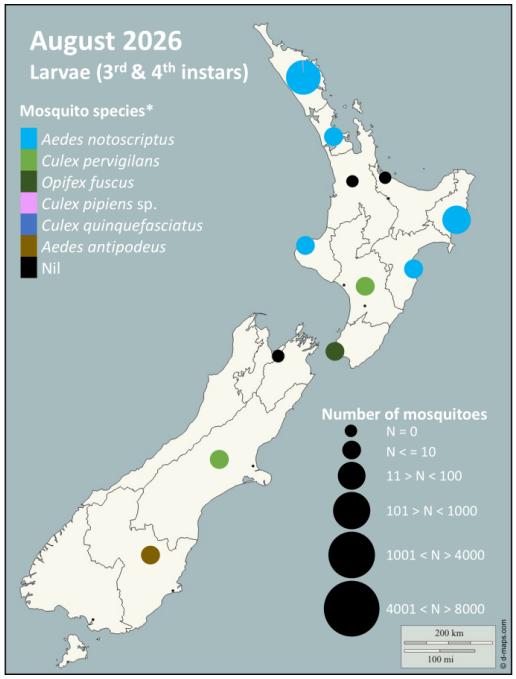


Figure 1. Total mosquito adults (a) and 3rd and 4th instar larvae (b) sampled in New Zealand during August 2026 surveillance period.
Please note that the markers represent the PHUs and not the specific sites where the samples have been taken.
* The mosquito species are listed in order from the most abundant to the least abundant. *Culex* sp. refers to adult or larvae that are damaged or cannot be identified to the species level.

Figure 2 shows the current month 2025-2026 evolution of adult and larval specimens of introduced species collected including *Aedes notoscriptus*, *Aedes australis* and members of the *Culex pipiens* complex.

The largest increase for *Culex quinquefasciatus* adults was seen in Auckland with an increase of 4 specimens compared to last year, followed by Wellington with an increase of 1 specimen. The largest decrease was seen in Northland with a decrease of 9 adult specimens. For third and fourth-instar *Culex quinquefasciatus* larvae, there were none being collected any PHU except for Northland this year or last year. The largest decrease occurred in Northland with 75 larval specimens less than August 2025.

The biggest increase for *Culex pipiens* sp. larvae third and fourth-instars occurred in Northland with an increase of 2 specimens. 1 specimen of *Culex* sp. showing mixed features were collected in August this year in Bay of Plenty, however nil were found there last year.

There were no *Aedes notoscriptus* adults collected this month and the same month last year. For *Aedes notoscriptus* larvae the largest increase was in Hawke's Bay (40 specimens), MidCentral, Taranaki, and Tairawhiti also saw an increase in the number of *Aedes notoscriptus* larvae collected (38, 17 & 16 more specimen respectively). The largest decrease was in Northland (250 specimens), followed by Canterbury (175 specimens).

This year and last year nil *Aedes australis* have been collected in Southland.

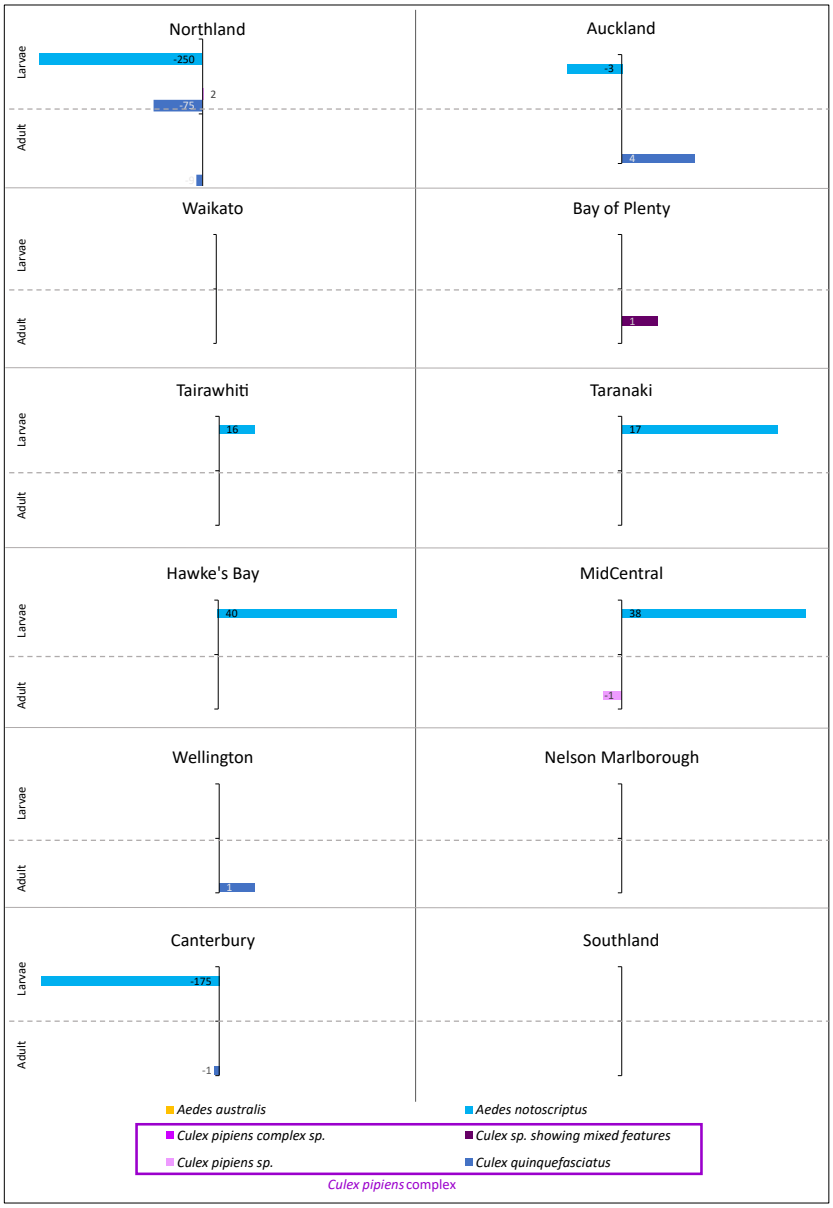


Figure 2. Comparison between the number of introduced mosquito species sampled in each PHU during August 2025 and 2026.

*Please note the different scale is different for each PHU. Species in the purple box are all members of the *Culex pipiens* complex. Larval ID is based on third and fourth instar only for species in the *Culex pipiens* complex while *Aedes notoscriptus* and *Aedes australis* are all larval stages.

Disclaimer: Please note that the identification and reporting processes for adult male and female mosquitoes, as well as first and second-instar larvae of *Culex* species found in New Zealand, were adjusted since the start of 2026. To identify males of the *Culex pipiens* complex to species level, the genitalia must be processed — a technique that is highly time-consuming. For this reason, the NZB laboratory identified only a sub-sample of male mosquitoes from each collection to species level. The remaining males in each sample were identified using the palps and classified as either *Culex pipiens* complex sp. or any other endemic *Culex* species (*Culex pervigilans, Culex asteliae* or *Culex rotoruae*). Females were placed in the *Culex pipiens* complex when one or more key identification features were missing (for example a wing, abdominal scales, or the abdomen itself). *Culex* larvae in the first or second instar are not always identifiable to species level; when this happens, these are reported as *Culex* sp. The term *Culex* sp. is also used when specimens are too damaged to be identified beyond the genus level.

INCURSIONS AND INTERCEPTIONS

During August, HPOs responded to five suspected interceptions (Table 2). This included one exotic mosquito, two of a locally occurring mosquito and two non-mosquitoes. It also included a historical e-DNA sample that was processed that showed *Aedes albopictus* e-DNA.

Table 2. Suspected interceptions during August 2026

Date	Species	Location	Circumstances
06.08.2026	*Aedes albopictus* (e-DNA)	Waipa River	e-DNA found in a 2024 water sample from the Waipa River. Detection occurred in one of the six replicates taken at low sequence reads (8) using 1.2-micron (standard) filters. Sample was collected by the City Council and analysed by Wilderlab.
13.08.2026	1x non-mosquito (Tipulomorpha)	CentrePort Wellington (Transitional Facility)	Found alive by a quarantine officer at CentrePort. The cranefly was observed flying outdoors in an open area near machinery.
19.08.2026	1x Male *Culex quinquefasciatus*	Wellington International Airport	Found attached to a sticky trap in the biosecurity area at WIAL
20.8.2026	1x non-mosquito (Sciaridae)	Christchurch Airport	Found dead by CIAL operations team and notified to NPHS by the Apron & Wildlife Manager at Christchurch airport
21.08.2206	1x Male *Culex quinquefasciatus*	Icon Logistics, Dunedin (Transitional Facility)	Found dead in a consignment of PVC sound barriers from China

NEWS ARTICLES FROM AROUND THE WORLD

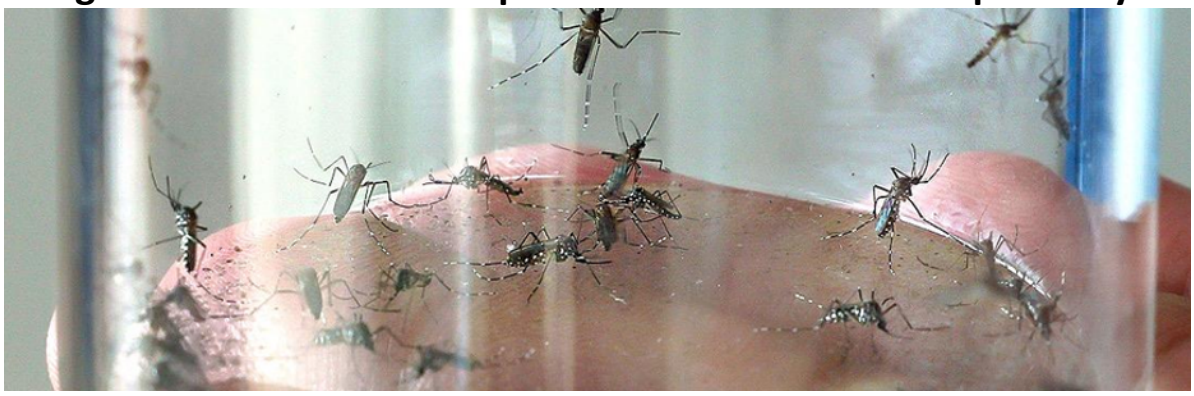
World Mosquito Day 2026: Which mosquito spreads which disease?

The diseases that are transmitted by mosquitoes varies depending on the species of mosquito, with only a small number of the over 3500 species worldwide actually transmitting pathogens to humans. With World Mosquito Day occurring on the 20th of August what better time to have a bit of a refresher on what some of the most important groups of mosquito carry, their behaviours and some ways to prevent mosquitoes breeding and biting. Read more here.

Two German airport workers die of malaria after 'mosquito arrives on plane'

Two airport workers have died at Frankfurt Airport in Germany following six workers contracting malaria. Increase surveillance has been set up at the airport, with mosquito traps being deployed to determine the species of mosquito and the likely origin as the Frankfurt Public Health Department investigates. As malaria in Germany is almost exclusively from travellers, it is likely that infected mosquitoes had arrived at the airport on a plane. Read more here.

Dengue cases rise across Nepal as it marks World Mosquito Day



Dengue infections have spread in Nepal with infections reported in almost all districts. Health authorities are warning that cases may continue to increase, even after monsoon season, and that the public should remain vigilant during this period that can favour mosquito breeding. Find out more here.

World Mosquito Day 2026: Europe must upgrade control tools as disease risks rise

As mosquito borne diseases such as West Nile virus spread through Europe, and invasive species such as *Aedes albopictus* continues to establish in more European countries, the ECDC has published a report on the mosquito surveillance and control practices in Europe, which highlights that a more robust and interconnected approach. Read more here.

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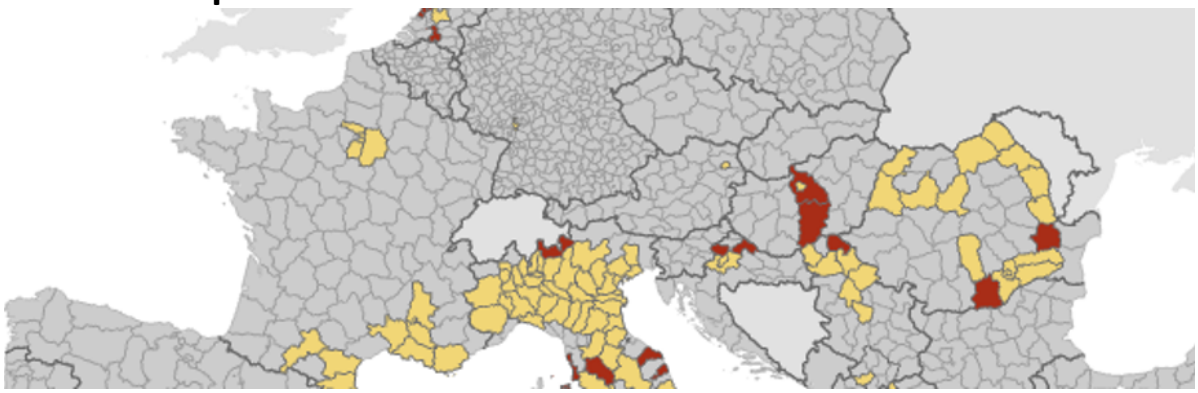
Weekly overview of areas affected by West Nile virus in Europe based on reported human cases



As we reported in last month's newsletter, Europe has seen a high number of cases of West Nile virus in since the beginning of the transmission season. An update on the current number of cases by country can be found here, including which areas of countries are affected.

Invasive mosquito species found breeding in London

A small population of *Aedes aegypti* have been discovered breeding in East London homes. The discovery was made through the UK Health Security Agency (UKHSA) Mosquito Watch scheme which is a citizen science project set up to help detect invasive species. While *Aedes aegypti* have previously been detected in the UK, this is the first time that they have been breeding there. Read more about this here.

You're not every mosquito's type

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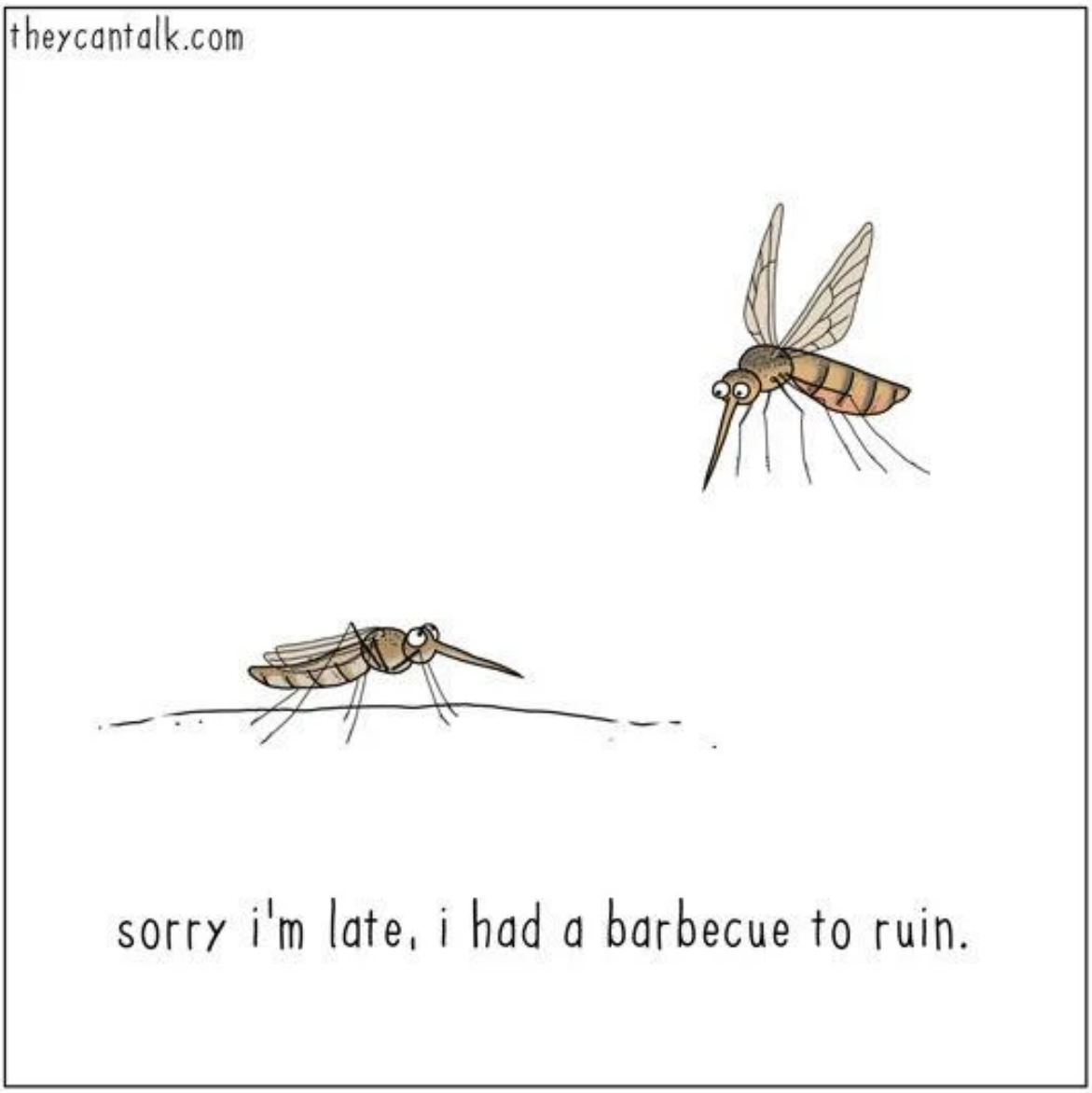
It's long been known that some people in a group seem to be extra attractive to mosquitoes and are always being bitten, with scientists trying to determine what exactly it is that makes some people more attractive than others. A study by researchers at Florida International University looked at three common species of mosquito found in Florida and found that who was most attractive to the mosquitoes actually depended on the species of mosquito. Read a summary of what each of the mosquitoes are looking for here . A more in-depth summary can be found here, and the scientific article can be found here (please note the article is open access at time of newsletter publication; however, this may change over time).

A BITE OF HUMOUR



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RISK MAPS

Dengue Map – Centres for Disease Control and Prevention
Zika Map – Centres for Disease Control and Prevention
Malaria – Centres for Disease Control and Prevention
Malaria – World Health Organisation

DISEASE OUTBREAKS

To find out where the latest disease outbreaks have occurred visit:

Epidemic and emerging disease alerts in the Pacific region - Produced by the Pacific Community (SPC) for the Pacific Public Health Surveillance Network (PPHSN).

Disease Outbreak News - World Health Organization.

Communicable disease Dashboards - The New Zealand Institute for Public Health and Forensic Science (PHF Science) - formerly named the Institute of Environmental Science and Research (ESR).

Communicable disease threats report - European Centre for Disease Prevention and Control