



BORDER HEALTH NEWSLETTER

JULY 2026

NAU MAI, HAERE MAI - WELCOME!

Kia ora koutou katoa,

It was fantastic to meet everyone who attended the Border Health and Ship Sanitation Course this month in Wellington. We hope that you all enjoyed learning about mosquitoes as much as we enjoyed teaching you! For this month's newsletter, we've put together some photos that were taken during the course, as well as some of the practice photos from the "How to photograph a mosquito" session.



With all the cold weather we've been having recently we think it's a great opportunity to grab yourself a hot drink and have a look at some mosquito news from around the world. This month, read about how the changing climate is affecting childhood malaria numbers, how Sri Lanka is using drones to find mosquito habitats, how a researcher has created an identification tool that uses the frequency of mosquito wings for ID. We also have an update on West Nile virus in Europe, which includes some handy tips for preventing mosquito bites. If you read our May newsletter, you may recall an article about how Google's parent company, Alphabet, is seeking permission to release sterilised male mosquitoes. Well, this month we have an article about trials that occurred across the ditch, with impressive results!



BORDER HEALTH NEWSLETTER



Happy reading!

SURVEILLANCE

During July a total of 1006 routine and enhanced surveillance, and various survey samples were collected by staff from 12 PHUs (Figure 1). The samples included 35 positive larval samples and 18 positive adult samples, leading to a total of 631 larvae and 19 adults identified over the past month (Table 1).

Aedes notoscriptus was the dominant larval species last month (651 specimens) and this month (436 specimens) and in July 2025 (918 specimens). For adults, *Culex quinquefasciatus* was the dominant species this month and July 2025 (11 and 43 specimens respectively) (Table 1).

In total, four mosquito species have been collected this month (Table 1), which is three 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 July 2025 & 2026

Species (common name)	Adults		Larvae	
	July 26	July 25	July 26	July 25
<i>Aedes antipodeus</i> (Winter mosquito)	-	2	-	-
<i>Aedes australis</i> (Saltwater mosquito)	-	-	-	22
<i>Aedes notoscriptus</i> (Striped mosquito)	1	-	436	918
<i>Culex</i> sp.	-	4	25	-
<i>Culex pervigilans</i> (Vigilant mosquito)	5	8	130	122
<i>Culex pipiens</i> sp. (Common house mosquito)	1	-	6	-
<i>Culex</i> sp. showing mixed features	1	-	-	-
<i>Culex quinquefasciatus</i> (Southern house mosquito)	11	43	34	80
TOTAL	19	57	631	1142

Compared to the previous month, the total numbers of larvae and adults have shown a

Biosecurity Specialists



BORDER HEALTH NEWSLETTER

decrease (49% and 86% respectively).

Compared to this same month last year, the total numbers of larvae and adults have shown a decrease (45% and 67% respectively) (Table 1).

The highest number of larvae sampled this month (all instars included) was obtained in Northland (570 larvae) followed by Auckland (32 larvae). Considering only third and fourth instars, the highest number of larvae sampled this month was obtained by Northland (570 larvae) followed by Auckland (32 larvae) (Figure 1).

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

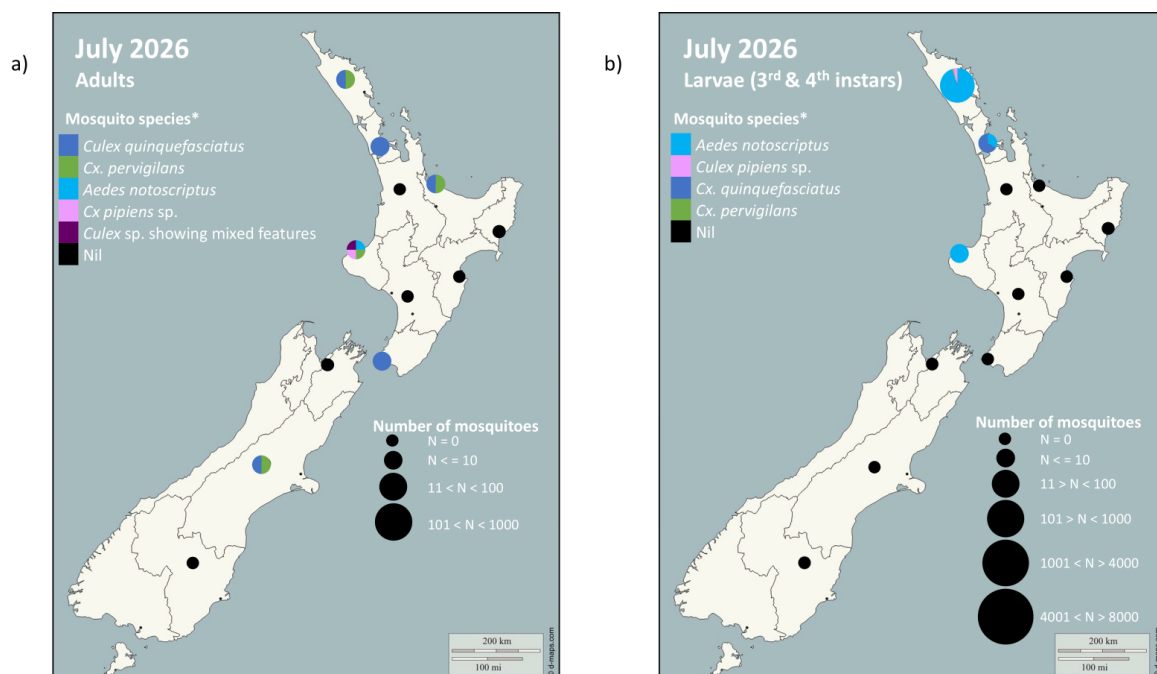


Figure 1. Total mosquito adults (a) and 3rd and 4th instar larvae (b) sampled in New Zealand during July 2026 surveillance period.

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 2 specimens compared to last year, closely followed by Bay of Plenty, Wellington and Canterbury with an increase of 1 specimen. The largest decrease was seen in Northland with a decrease of 35 adult specimens. For third and fourth-instar *Culex quinquefasciatus* larvae, a large increase was noted in Auckland where the numbers increased by 2 specimens. The largest decrease occurred in Taranaki with 2 larval specimens less than July 2025.



BORDER HEALTH NEWSLETTER

The biggest increase for *Culex pipiens* sp. larvae third and fourth-instar occurred in Northland with an increase of 6 specimens, followed by Taranaki with an increase of 1 specimen. *Culex* sp. showing mixed features were collected in July this year in Taranaki, however nil were found there last year.

The largest increase for *Aedes notoscriptus* adults was seen in Taranaki (1 more specimen compared to last year). For *Aedes notoscriptus* larvae the largest increase was in Taranaki (19 specimens), Nelson Marlborough also saw an increase in the number of *Aedes notoscriptus* larvae collected (1 more specimen). The largest decrease was in Northland (472 specimens), followed by MidCentral.

This year nil *Aedes australis* have been collected in Southland, that is 22 less specimen than July last year.

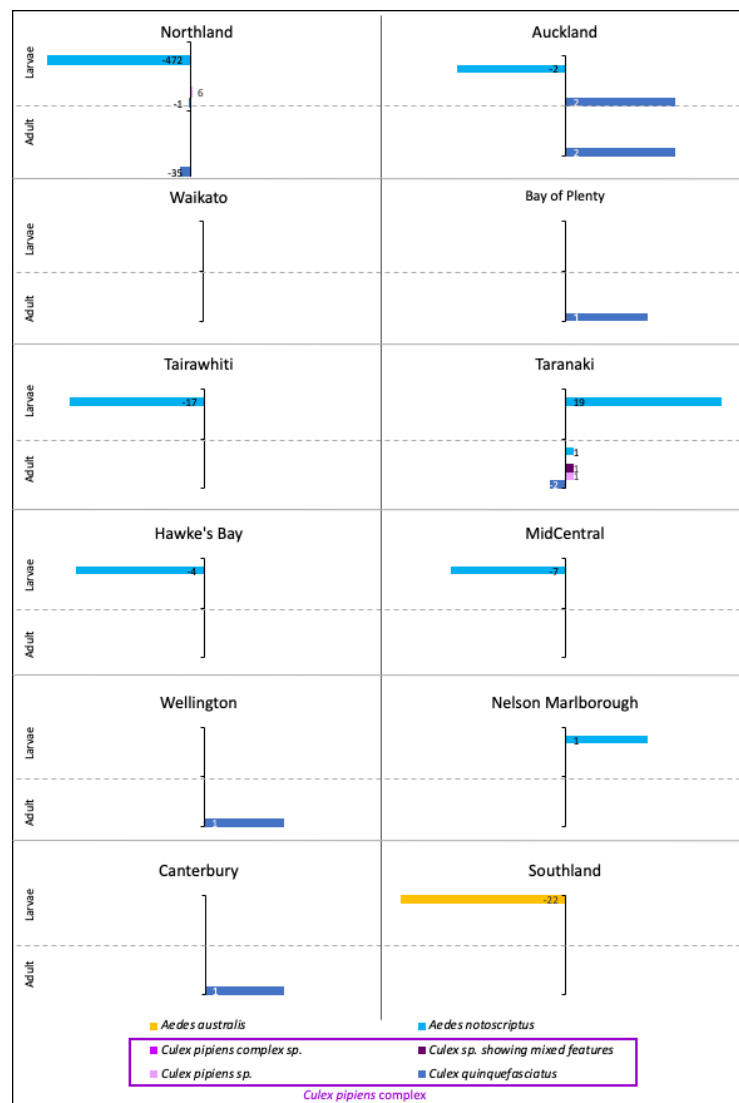


Figure 2. Comparison between the number of introduced mosquito species sampled in each PHU during July 2025 and 2026.

*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.



BORDER HEALTH NEWSLETTER

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 July, HPOs responded to three suspected interceptions (Table 2). This included one of an endemic mosquito and two non-mosquitoes.

Table 2. Suspected interceptions during July 2026

Date	Species	Location	Circumstances
08.07.2026	1x non-mosquito (Diptera)	Farmers Distribution Centre, Auckland (Transitional Facility)	Found dead in a container of bed sheets. From Hong Kong
20.07.2026	1x non-mosquito (Tipulomorpha)	Briscoes Distribution Centre, Auckland (Transitional Facility)	Found alive, flying out of a carton of duvet covers/blankets. Container was not treated since arrival.
29.07.2026	1x female <i>Culex pervigilans</i>	Sorted Logistics, Christchurch (Transitional Facility).	Found alive flying out of a container of soft wood pulp and landscaping supplies. Container was sprayed on discovery of mosquito. The container doors were open for 30 mins while being unloaded. It is highly likely that the mosquito flew into the container during this window.

NEWS ARTICLES FROM AROUND THE WORLD

West Nile virus: as cases rise across parts of Europe, here is what you need to know



The World Health Organization is urging countries in Europe to strengthen their mosquito surveillance, and to remind the public of the protective measures they can take against West Nile virus as the number of cases increase. Despite being early in the transmission season, there have been a number of human cases across Europe with the highest numbers so far in



BORDER HEALTH NEWSLETTER

Greece and Italy. [Read more here](#) which includes reminders of how to protect yourself against mosquito bites and how to recognise the symptoms of West Nile virus.

What is the mosquito-borne disease Sri Lanka is using drones to fight?



Sri Lanka is currently battling its worst outbreak of dengue in almost a decade with the virus infecting over 77,000 people and killing 56 this year. The surge in dengue infections has been attributed to a cyclone that occurred last December that scattered debris that have become breeding sites for mosquitoes. To help find these sites, the government has been using military drones to scan rooftops or homes, schools and construction sites. [Read more here](#) including a bit about dengue fever and its symptoms.

By listening to the buzz of a mosquito's wings, UOW academic Kiran Trivedi is redefining how communities track the diseases mosquitoes carry

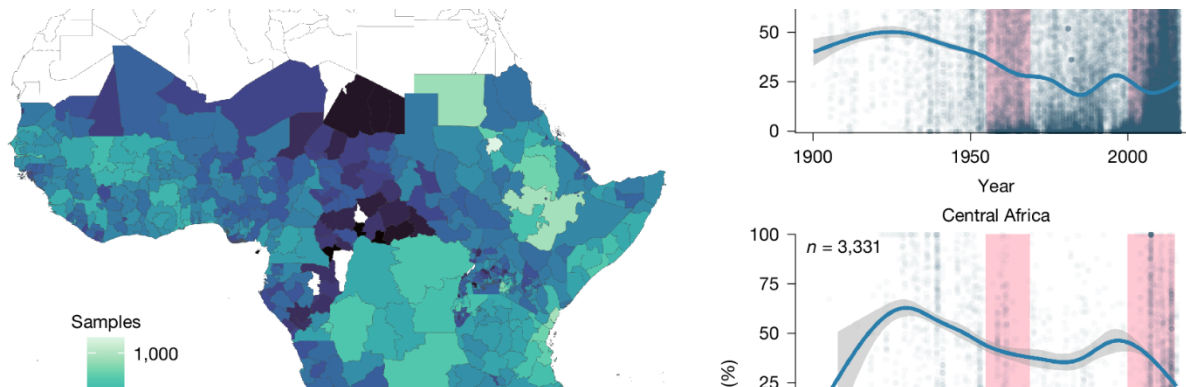


An associate professor at the University of Wollongong's India campus has developed a device that is able to identify disease-carrying mosquitoes by their wingbeats as an alternative to traditional surveillance methods for tracking malaria and dengue. The system is portable and uses AI to identify Aedes, Anopheles, and Culex mosquitoes, without the need for an internet connection, the cloud or a large computer. [Read more about it here.](#)



BORDER HEALTH NEWSLETTER

The past and future impact of climate change on childhood malaria in Africa



This study looks at the link between the influence of human-caused climate change and the burden of childhood malaria in sub-Saharan Africa and uses this as a prediction of how changing climate could change the prevalence of childhood malaria in sub-Saharan Africa. The study used over a century of clinical data from just over a century and found that while climate is unlikely to be the strongest driver of global malaria trends, there is a robust relationship between the prevalence of malaria and the climate (both temperature and rainfall). [Read more here.](#)

Google wants to release 16 million sterile mozzies. Our Australian tests offer a valuable lesson



In our May Newsletter, [we had an article](#) about how in the USA Google's parent company Alphabet is seeking permission from the federal government to release up to 32 million sterilised male mosquitoes in the States of California and Florida as part of the Debug Initiative. The project has raised questions with the public in the US about whether this is safe, whether it will work at scale and what happens after. [This article](#) discusses a previous trial that occurred in Queensland, Australia with impressive results, that answers many of the concerns about the current proposal in the USA.



BORDER HEALTH NEWSLETTER

MOSQUITO PHOTO PRACTICE



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