



BORDER HEALTH NEWSLETTER

JANUARY 2026

NAU MAI, HAERE MAI - WELCOME!

Kia ora koutou katoa,

It's been a hot and humid start to the year, and mosquito activity has been ramping up fast! In our previous newsletter, we explored the differences between the exotic Asian tiger mosquito and the local ankle-biting mosquito, helping readers understand how to recognise and distinguish these species. This month, our focus shifts to reporting suspected exotic mosquitoes, outlining what to look for and the steps to take if you think you've encountered an unusual species. Early reporting plays a critical role in preventing the establishment of invasive mosquitoes.

In this month's mosquito news, we highlight major developments from around the world, including how new malaria tools helped save an estimated one million lives in 2024, while rising drug resistance threatens to slow progress. We also feature ground breaking work from Griffith University on a promising vaccine to protect against chikungunya, explore new research showing how shrinking forests are pushing mosquitoes to feed more on humans, increasing disease risk, and report on the detection of African-lineage Zika virus in free-ranging primates in southern Brazil — raising important questions about viral circulation and spill over.

Happy reading!

SURVEILLANCE

During January a total of 1236 routine and enhanced surveillance, and various survey samples were collected by staff from 12 PHUs (Figure 1). The samples included 233 positive larval samples and 116 positive adult samples, leading to a total of 16277 larvae and 822 adults identified over the past month (Table 1).

Please note that the identification and reporting processes for male and female mosquitoes, as well as first- and second-instar larvae of *Culex* species found in New Zealand, were adjusted since last month for processing. 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 *Culex pervigilans*. 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.

Since last month, some yearly and monthly comparisons are made using only third- and fourth-instar larvae.

Biosecurity Specialists



BORDER HEALTH NEWSLETTER

Considering only third- and fourth-instar larvae, *Aedes notoscriptus* was the dominant larval species this month and in January last year, and it was also the dominant species last month (Table 1).

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

Species (common name)	Adults		Larvae	
	Jan 26	Jan 25	Jan 26	Jan 25
<i>Aedes sp.</i> (no common name)	1	-	2	-
<i>Ae antipodeus</i> (winter mosquito)	18	12	-	-
<i>Ae australis</i> (saltwater mosquito)	1	-	-	-
<i>Ae notoscriptus</i> (striped mosquito)	28	22	7944	4285
<i>Coquillettia iracunda</i> (no common name)	2	1	-	-
<i>Coq tenuipalpis</i> (no common name)	-	1	-	-
<i>Culex sp.</i>	139	16	3570	-
<i>Culex sp.</i> showing mixed features	47	1	75	-
<i>Cx asteliae</i> (no common name)	1	-	22	2
<i>Cx pervigilans</i> (vigilant mosquito)	44	41	1622	1907
<i>Cx pipiens</i> complex (no common name)	135	-	15	-
<i>Cx pipiens</i> spp. (no common name)	33	-	104	-
<i>Cx quinquefasciatus</i> (southern house mosquito)	371	298	2574	6505
<i>Opifex fuscus</i> (rock pool mosquito)	2	-	349	123
Total	822	392	16277	12822

In total, nine mosquito species have been collected this month (Table 1), that is one more than last month.

Compared to the previous month, the total numbers of larvae have shown an increase (34%) while adults have shown a decrease (20%).

Compared to this same month last year, the total numbers of larvae and adults have shown an increase (27% and 109% respectively) (Table 1).

The highest number of larvae sampled this month was obtained in Northland (7596 larvae) followed by Hawke's Bay (2970 larvae) (Figure 1).



BORDER HEALTH NEWSLETTER

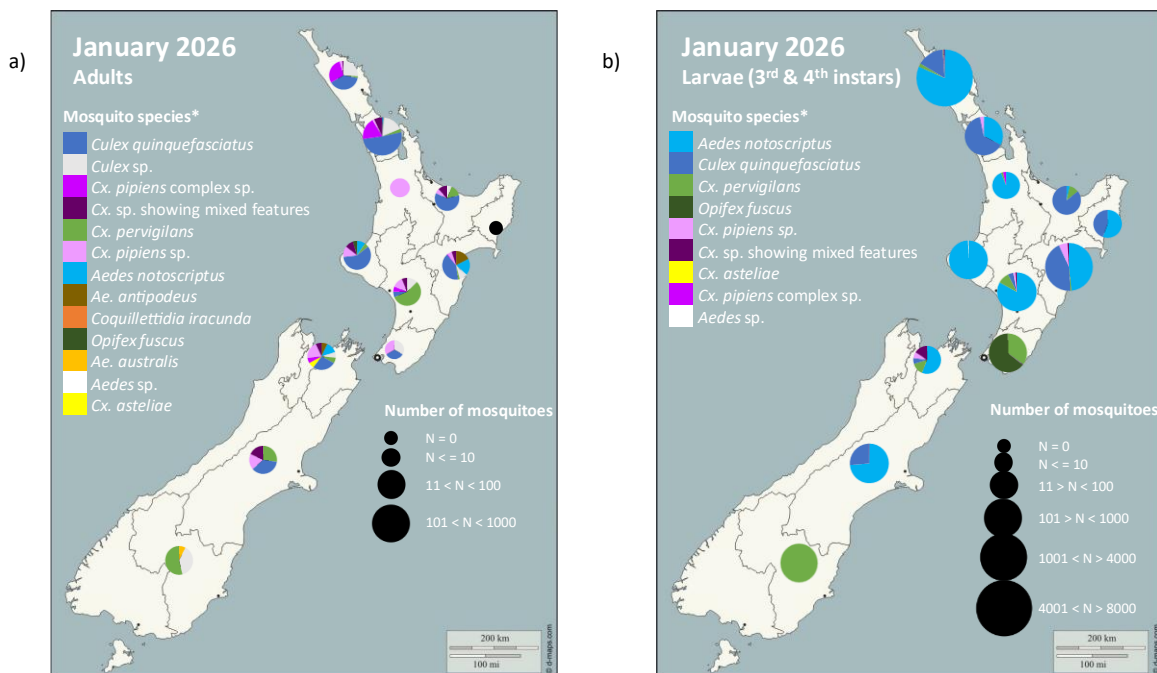


Figure 1. Total mosquito adults (a) and 3rd and 4th instar larvae (b) sampled in New Zealand during January 2026 surveillance period.

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.

As expected, *Aedes notoscriptus* and the members of the *Culex pipiens* complex have not been recorded this year in Southland (Figure 1).

INCURSIONS AND INTERCEPTIONS

During January, HPOs responded to one suspected interception (Table 2).

Table 2. Suspected interception during January 2026

Date	Species	Location	Circumstances
16.01.2026	1x Chironomidae indet. (non-biting midge)	GVI Logistics (Transitional Facility)	Found dead at the bottom of a tray of grapes during inspection. No further insects were found.



NEWS ARTICLES FROM AROUND THE WORLD

Shrinking forests push mosquitoes toward humans, raising disease



Deforestation and declining wildlife populations are forcing mosquitoes to turn to humans for blood, creating new pathways for diseases such as dengue, Zika, yellow fever, and chikungunya. A recent study in Brazil shows that reduced biodiversity and disrupted habitats push mosquitoes closer to people, while species that once relied on wildlife now feed primarily on humans. Disturbed ecosystems favour mosquito species that thrive near human settlements, increasing both their abundance and the likelihood of disease transmission. Experts warn that these environmental changes are reshaping mosquito behaviour, heightening public health risks and underscoring the need for integrated approaches to conservation, disease prevention, and community protection.

Read more about this topic [here](#). Access the full scientific journal [here](#).

Griffith University pioneers vaccine to protect against Chikungunya



Griffith University researchers are developing a promising new vaccine to prevent chikungunya, a mosquito-borne virus that attacks joint tissue and can cause long-lasting arthritis-like pain. Using engineered biopolymer particles that mimic the virus, the vaccine triggers a strong immune response without causing disease. Early research shows the particles are efficiently recognized by immune cells, paving the way for clinical trials to test safety and efficacy and offering hope for millions at risk worldwide.

Read more on this topic [here](#).



BORDER HEALTH NEWSLETTER

New Malaria tools saved a million lives in 2024, but drug resistance threatens progress



In 2024, wider use of dual-ingredient mosquito nets, vaccines, and seasonal chemoprevention prevented an estimated 170 million malaria cases and 1 million deaths, according to WHO's World Malaria Report. Yet the fight against the disease faces rising challenges: antimalarial drug resistance is spreading in Africa, diagnostic tests are being undermined by parasite mutations, and insecticide-resistant mosquitoes are spreading, including urban-adapted *Anopheles stephensi*. Extreme weather, conflict, and stalled global funding further threaten malaria elimination efforts. Despite these hurdles, 24 countries have integrated WHO-recommended vaccines into routine immunization programs, and new treatments like non-artemisinin combination therapies offer hope. Experts emphasize that sustained political commitment, targeted funding, and innovative tools are crucial to keep malaria under control and advance toward a malaria-free future.

Read more on this topic [here](#).

African-lineage Zika Virus detected in free-ranging primates in Southern Brazil

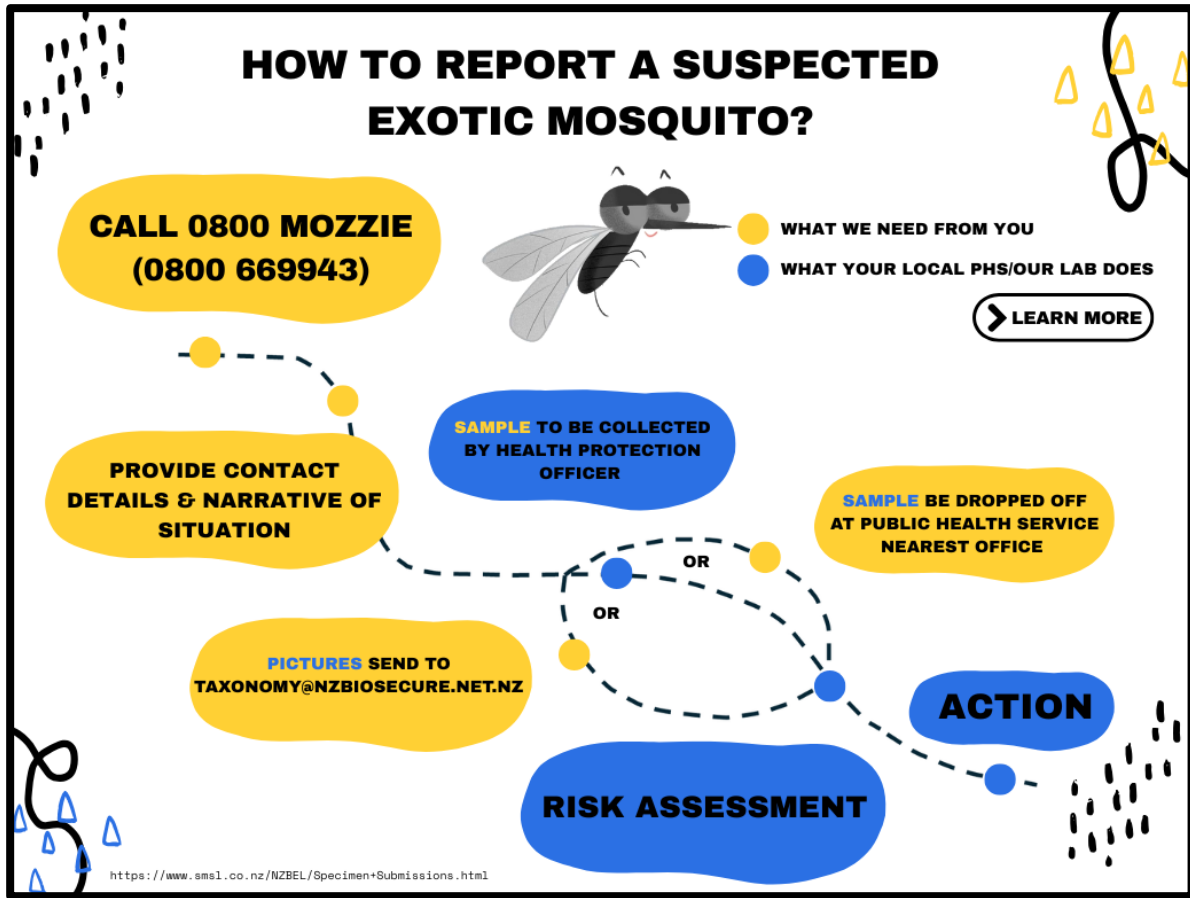


A new study published in *Zoonoses* reveals the repeated presence of African-lineage Zika virus (ZIKV) in free-living neotropical primates (*Alouatta guariba*) in Southern Brazil. Researchers found 11 primates positive for ZIKV by RT-PCR, with high-throughput sequencing showing 99.3% identity to the African MR766 strain. Histopathological findings included microcephaly, palatoschisis, calcifications in the neuropil, and inflammatory infiltrates, while viral antigens were also detected in one placenta. The study's results suggest multiple introductions of African-lineage ZIKV into the Americas and underscore the need to monitor sylvatic reservoirs to understand viral circulation and potential spillover into humans. Read more on this topic [here](#).



BORDER HEALTH NEWSLETTER

A BITE OF ADVICE



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.

[Public Health Surveillance](#) - Institute of Environmental Science and Research (ESR) - Information for New Zealand Public Health Action.

[Communicable disease threats report](#) - European Centre for Disease Prevention and Control