Butterfly Count Project

Monitoring Update (2024–2026)

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Overview

The Butterfly Count project continues to expand across Aotearoa New Zealand through the efforts of dedicated volunteers. Over the past three years, surveys have been conducted across a growing network of locations, generating valuable insights into butterfly presence, absence, distribution, and volunteer participation.

This summary highlights the spatial coverage of the monitoring programme, the most frequently surveyed locations, patterns of butterfly abundance, species that commonly occur together, and the contribution of volunteers who support this nationwide effort.

Sections

1. Locations Surveyed

Over the past three years, **238 distinct locations** have been surveyed across the country.

In **2026 alone**, the programme has already covered **170 locations**, with **286 survey visits recorded this year**. Data collection for this year's monitoring period has now been completed.

This indicates a strong expansion of the monitoring network and continued engagement from volunteers across multiple regions.

2. Revisited Locations

Of the 238 locations surveyed over the past three years, **57 locations were visited more than once**. The monitoring programme is conducted over a **short period of approximately two weeks in February** (originally one week), and is intended to be repeated annually to support consistent year-on-year comparisons

Repeated visits to the same location are particularly valuable because they allow the programme to:

- track butterfly activity across seasons
- observe long-term trends in butterfly populations
- identify changes in species presence over time

These revisited locations effectively form the **core monitoring network** of the programme.

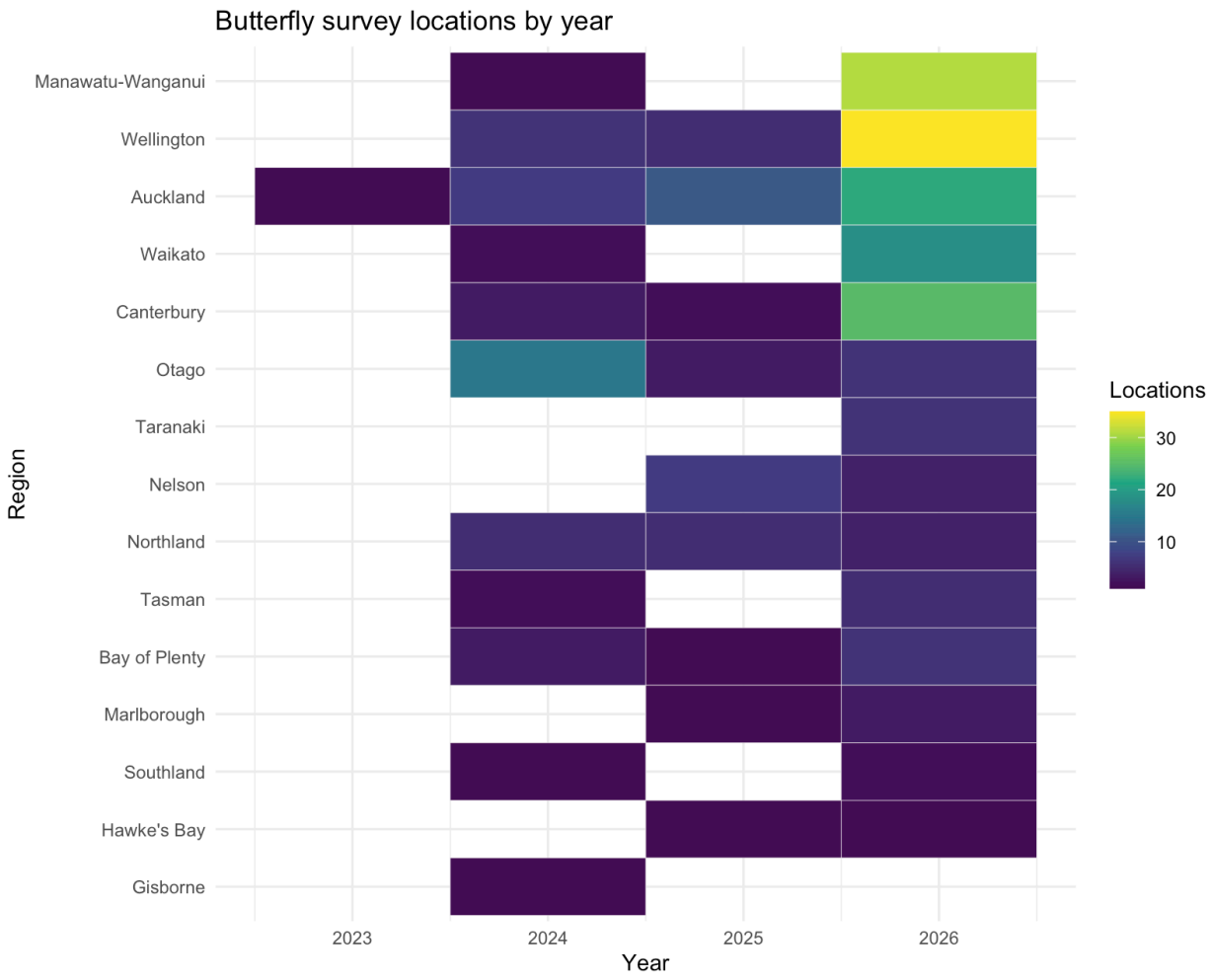
3. Regional Coverage

Survey activity has occurred across multiple regions of New Zealand.

A notable development in **2026** is the addition of **Taranaki**, where butterfly surveys were recorded for the first time. No one has surveyed **Gisborne** since **2024**.

Among regions surveyed in 2026 so far:

- **Wellington** has the largest number of distinct locations surveyed
- followed by
  Manawatū-Whanganui
  Auckland
  Canterbury
  Waikato



This distribution highlights the strong participation of volunteers across several regions and suggests that the monitoring network is continuing to broaden geographically.

4. Long-Term Monitoring Hotspots

Some locations have been surveyed repeatedly over the years, indicating areas where volunteers are conducting **long-term monitoring**.

Notable examples include:

Auckland

Three locations, with two over 14 visits, have been surveyed particularly frequently.

Canterbury

Two locations have emerged as monitoring hotspots.

Wellington and Otago

Each region has **one location that has been surveyed repeatedly**.

5. Volunteer Participation

The butterfly monitoring programme relies heavily on volunteers who contribute time and effort to surveying locations across the country.

One particularly active volunteer is:

Zenobia Southcombe, who has surveyed:

- **7 different regions**
- **20 different locations**
- over the past three years

Several other volunteers have also contributed significantly, each conducting **10 or more survey visits**.

These include:

- Zenobia Southcombe – Otago
- Claire Berrett – Manawatū-Whanganui
- Jacqui Knight – Auckland
- Bronwyn Patterson – Auckland
- Jen Pudney – Wellington
- Irvin Harter – Canterbury
- Linda Coster – Auckland
- Molly Wittig – Marlborough

These volunteers form the backbone of the monitoring network.

6. Volunteer Retention

Sustained participation is critical for long-term monitoring.

Encouragingly, **18 volunteers have been active for more than one year**, including:

Jacqui Knight
Zenobia Southcombe
Linda Coster
Joanne Ryves
Tejo van Schie
Joanna Dunn
Connal McLean
Pip Callinan
Selena Grant
Bronwyn Patterson
Peter Field
Gillian Candler
Roger Keedle
Maggie Purnell
Devangi Farah
Yvonne McGillan
Annie Murrell
Diane Wildbore

Returning volunteers provide continuity and often contribute repeated surveys at the same locations, which strengthens the dataset.

7. Surveying Behaviour

Most volunteers tend to focus on monitoring a **single location**, which may help build consistent long-term records.

Only **27 volunteers have surveyed more than one location**.

8. Volunteer Participation

The monitoring programme has experienced **significant growth in volunteer participation**.

The number of new volunteers joining each year is shown below:

Year	New volunteers
2023	1
2024	26
2025	19
2026	105

In **2026**, the programme recorded **105 new volunteers**, representing the largest influx of participants since monitoring began.

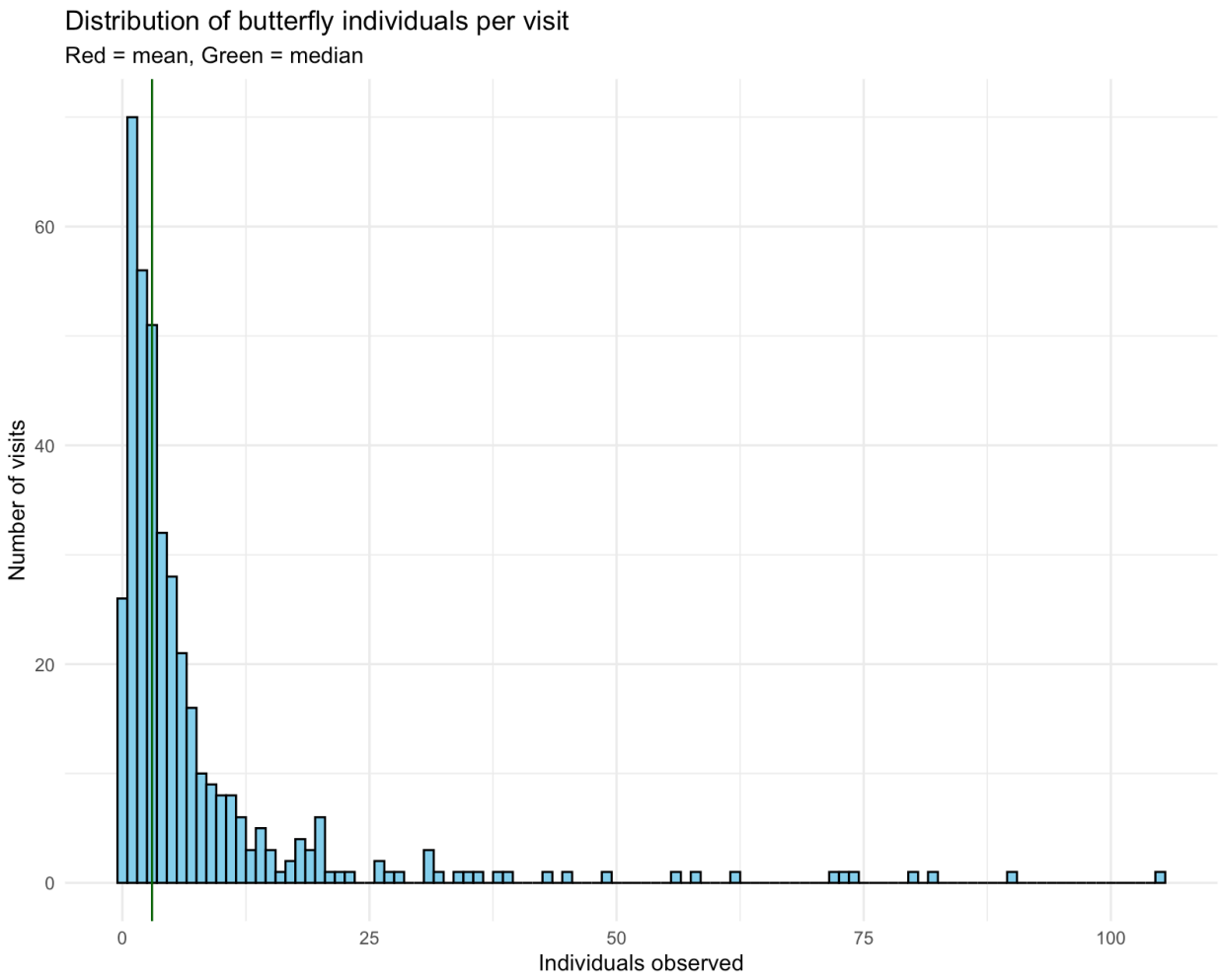
Volunteer recruitment was calculated by identifying the **first year each participant recorded a survey visit**, providing an indicator of programme growth.

This increase suggests that the butterfly monitoring initiative is gaining visibility and attracting wider community engagement.

9. Patterns of Butterfly Abundance

A histogram of the **number of individual butterflies recorded per visit** reveals several clear patterns:

- Many visits record **single butterflies**
- **Small groups of individuals** are relatively common
- Occasionally there are **abundance events** where larger numbers of butterflies are recorded
- A small number of visits recorded **no butterflies**



These patterns reflect both **natural ecological variation** and **changes in survey methods over time**.

Changes in Survey Methodology

Sampling methods have changed between earlier surveys and the current monitoring approach.

Previously (e.g., in **2024**):

- Volunteers **walked from point to point**
- Each butterfly sighting along the route was recorded

In the **current approach**:

- Volunteers **remain at a fixed location**
- Butterflies are recorded **when they appear within the observation area**

Because of this shift:

- Earlier surveys may have encountered **more butterflies due to greater movement across habitats**
- The current method captures **local activity at a fixed point**, which may lead to **more isolated sightings**

These methodological differences help explain the variation observed in the number of individuals recorded per visit.

10. Species Occurrence and Co-Occurrence

Analysis of species observations shows clear patterns in which butterflies are most commonly encountered and which species are often recorded together.

Dominant Species in the Dataset

One species clearly stands out:

Pieris rapae – Small White/ Cabbage White

The **Small White** appears in nearly every co-occurrence pair in the dataset.

This indicates that it is:

- the **most widespread species recorded**
- one of the **most frequently encountered butterflies in surveys**

This is ecologically expected because the Small White is an **introduced species that thrives in urban and agricultural environments**.

Most Common Co-Occurring Species

Several species frequently appear alongside the Small White.

These combinations often reflect **shared habitats**, particularly urban and peri-urban landscapes.

Scientific name pair	Common name pair	Visits together	Possible interpretation
Danaus plexippus plexippus – Pieris rapae	**Monarch – Small White**	128	Very frequent overlap in gardens and open habitats
Zizina labradus labradus – Pieris rapae	**Common Blue – Small White**	35	Common in grassy and urban habitats

Scientific name pair	Common name pair	Visits together	Possible interpretation
Vanessa gonerilla – Pieris rapae	**New Zealand Red Admiral – Small White**	16	Often share urban gardens
Lycaena salustius – Pieris rapae	**Common Copper – Small White**	15	Occurs in open grassland and roadside habitats

Conclusion

The butterfly monitoring programme continues to grow both geographically and in terms of volunteer participation.

Key developments include:

- **238 locations surveyed across three years**
- **170 locations already surveyed in 2026**
- **57 locations forming the core repeated monitoring network**
- **Small White is emerging as the most frequently encountered species**
    - **This makes it important to educate NZers that "butterflies" does not necessarily mean just "monarchs"**
- **Urban gardens and open landscapes appear as key monitoring habitats**
- **a substantial increase in volunteer participation in 2026**

Together, these efforts are helping to build an increasingly valuable dataset that supports understanding of butterfly distribution and seasonal activity across Aotearoa.

Continued monitoring and volunteer engagement will be essential for tracking long-term trends and ensuring that the programme remains a powerful tool for butterfly conservation.

Implications from the study

1. **Strengthening Long-Term Monitoring**
   Supporting/encouraging volunteers of repeat visits will strengthen the programme's ability to detect changes over time, rather than only capturing one-off observations. This will greatly improve the scientific value of the dataset.

2. **Urban and semi-urban areas as key monitoring sites**
   Gardens, parks, and roadside vegetation are playing a critical role as accessible monitoring sites and important habitats for butterflies.
   This also presents an opportunity to promote pollinator-friendly planting and management practices in public and private spaces.

3. **Species understanding and public awareness**
   There is a strong opportunity to improve **species awareness among the public**, emphasising that butterfly diversity in Aotearoa extends beyond monarchs. Increasing awareness of species such as **blues, admirals, and copper butterflies** can deepen public engagement and support for conservation.

4. **Volunteer engagement and programme growth**
   Future efforts could focus on **encouraging continued participation** across years (retention) and covering more locations.