

Technical report
WEIIINGTON REGION
T T W Sate of NZ Garden Birds

We have estimated how bird counts have changed since 2007 in different regions and towns across New Zealand for 14 common garden visitors - five native and nine introduced birds.

Thanks to all our volunteer bird counters, 31,679 garden surveys have been completed nationwide since 2007. We use specialised statistical tools to account for variation in sampling effort between regions, towns and suburbs over time. We also account for variation in bird counts depending on whether the surveyed gardens were in a rural or urban settingand if birds were fed or not. We also correct for the actual number of gardens in each area.

We then classify these changes according to their direction and size (see adjacent diagram) to help us identify changes of potential concern or interest.

## Drawing attention to changes in counts of potential concern or interest

Counts decline


Counts increase


Change class for each species, based on the 1001 bootstrap replicates, indicated by double circle. The degree of shading indicates where these replicates lie.

Quality rating category for each species shows the strength of evidence for the change class based on the 1001 replicates.

Quality rating


## How have bird counts changed?

## WELLINGTON REGION | 2007-2017

NUMBER OF GARDEN SURVEYS


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## Featherston



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## How have bird counts changed?

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| Greytown | Median | 80\% Confidence Interval |  |  |  |  |  |  |  | Quality rating |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| bellbird | 37\% | 25 to $51 \%$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 00000 | Korimako |
| House sparrow | 24\% | 18 to $32 \%$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | ( | $\bigcirc$ | $\bigcirc$ | -0000 | TIU |
| new zealand pigeon | 21\% | 8 to $33 \%$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | - | $\bigcirc$ | $\bigcirc$ | -***O | kererú |
| mYna | 9\% | -108 to $42 \%$ | $\bigcirc$ | $\bigcirc$ | 0 | - | - | $\bigcirc$ | $\bigcirc$ | 00000 | maina |
| Greenfinch | 4\% | -13 to 19\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -0000 |  |
| TUI | 0\% | -6 to 4\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | ( | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -०००० | кӧко̃ |
| FANTALL | -2\% | -7 to 3\% | $\bigcirc$ | $\bigcirc$ | O |  | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -өөөө | píwalwaka |
| BLACKBIRD | -4\% | -8 to 0\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -*** | manu pango |
| Song thrush | -8\% | -15 to -2\% | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | -0000 |  |
| CHAFFINCH | -21\% | -27 to -15\% | $\bigcirc$ | - | - | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | -0000 | PAHIRINI |
| dunnock | -23\% | -32 to -14\% | $\bigcirc$ | - | () | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -**өө |  |
| GOLDFENCH | -33\% | -41 to -26\% | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | -0000 |  |
| starling | -47\% | -54 to -41\% | $\bigcirc$ | $\bigcirc$ | 0 | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -0000 | TARRINGI |
| silvereve | -65\% | -69 to -62\% | $\bigcirc$ |  | O | 0 | $\bigcirc$ | O | O | 00000 | tauhou |

NUMBER OF GARDEN SURVEYS


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## Martinborough

| Martinboroug | Median | 80\% Confi | idence al |  |  | $\begin{aligned} & \mathscr{y} \\ & \frac{5}{0} \\ & \frac{0}{0} \\ & \frac{3}{0} \\ & \frac{0}{\bar{W}} \end{aligned}$ | No or little change | $\stackrel{0}{0}$ © $\stackrel{0}{0}$ $=$ $\vdots$ $\frac{3}{\omega}$ $\frac{0}{\omega}$ | Moderate increase |  | Quality rating |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NEW ZEALAND PIGEON | 76\% | 36 to | 102\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 0 | ) | $\bigcirc$ | 00 | KERERU̇ |
| GREENFINCH | 45\% | 25 to | 60\% | $\bigcirc$ | $\bigcirc$ | 0 | 0 | ( | $\bigcirc$ | $\bigcirc$ | 00000 |  |
| BELLBIRD | 34\% | 23 to | 45\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | (1) | $\bigcirc$ | $\bigcirc$ | 20 0 | KORIMAKO |
| HOUSE SPARROW | 21\% | 15 to | 28\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | (-) | $\bigcirc$ | $\bigcirc$ | -eese | TIU |
| MYNA | 9\% | -108 to | 43\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | () | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 00000 | MAINA |
| TUI | 2\% | -4 to | 7\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | (0) | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -0-0- | KŌKŌ |
| FANTAIL | -2\% | -7 to | 3\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | (1) | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 000 | PIWAIWAKA |
| BLACKBIRD | -6\% | -10 to | -2\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | (2) | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -eeso | MANU PANGO |
| dunnock | -13\% | -23 to | -5\% | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | O | $\bigcirc$ | $\bigcirc$ | 0000 |  |
| SONG THRUSH | -21\% | -28 to | -16\% | $\bigcirc$ | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\cdots$ - ${ }^{-3}$ |  |
| GOLDFINCH | -24\% | -32 to | -19\% | $\bigcirc$ | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - 0 |  |
| CHAFFINCH | -28\% | -34 to | -22\% | $\bigcirc$ | ) | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -300 | PAHIRINI |
| STARLING | -33\% | -39 to | -26\% | $\bigcirc$ | ) | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 020 | TĀRINGI |
| SILVEREYE | -59\% | -63 to | -56\% | ( | $\bigcirc$ | $\bigcirc$ | 0 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - 0 - | TAUHOU |

## NUMBER OF GARDEN SURVEY


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## How have bird counts changed?

WELLINGTON REGION | 2007-2017

Masterton

| Masterton | Median | 80\% Confid Interv | dence al |  | Moderate decline | $\begin{aligned} & \mathscr{y} \\ & \frac{5}{0} \\ & \frac{0}{0} \\ & \frac{3}{0} \\ & \frac{0}{\bar{\omega}} \end{aligned}$ |  | $\begin{aligned} & \ddot{\sim} \\ & \stackrel{\pi}{0} \\ & \stackrel{0}{0} \\ & \stackrel{\pi}{3} \\ & \frac{0}{\bar{\omega}} \\ & \frac{\pi}{\omega} \end{aligned}$ |  |  | Quality rating |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NEW ZEALAND PIGEON | 102\% | 62 to | 131\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 0 | $\bigcirc$ | (1) | 00000 | KERERŪ |
| GREENFINCH | 86\% | 68 to | 100\% | $\bigcirc$ | $\bigcirc$ | 0 | 0 | $\bigcirc$ | - | $\bigcirc$ | -9909 |  |
| BELLBIRD | 36\% | 23 to | 49\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $0$ | $\bigcirc$ | $\bigcirc$ | -20 | KORIMAKO |
| MYNA | 29\% | -88 to | 62\% | $\bigcirc$ | $\bigcirc$ | 0 | $\bigcirc$ | (C) | $\bigcirc$ | $\bigcirc$ | 0000 | MAINA |
| FANTAIL | -4\% | -9 to | 0\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 0000 | PİWAIWAKA |
| TUI | -6\% | -11 to | -2\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -900 | KŐKŌ |
| BLACKBIRD | -6\% | -11 to | -3\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 0000 | MANU PANGO |
| HOUSE SPARROW | -14\% | -20 to | -7\% | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -3 ${ }^{\text {e }} 00$ | TIU |
| DUNNOCK | -14\% | -26 to | -4\% | $\bigcirc$ | $\bigcirc$ | () | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 0000 |  |
| CHAFFINCH | -20\% | -25 to | -14\% | $\bigcirc$ | $\bigcirc$ | - | 0 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - 0000 | PAHIRINI |
| SONG THRUSH | -28\% | -33 to | -24\% | $\bigcirc$ | ( | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -20 0 |  |
| GOLDFINCH | -33\% | -40 to | -27\% | $\bigcirc$ | ) | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -000 |  |
| STARLING | -43\% | -49 to | -38\% | $\bigcirc$ | ) | $\bigcirc$ | $\bigcirc$ | 0 | $\bigcirc$ | $\bigcirc$ | 0000 | TĀRINGI |
| SILVEREYE | -55\% | -59 to | -53\% | - | $\bigcirc$ | $\bigcirc$ | 0 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -9 ${ }^{\text {a }}$ | TAUHOU |

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Porirua Zone

|  | Median | 80\% Confi | dence <br> al |  |  | $\begin{aligned} & \stackrel{y}{\overline{0}} \\ & \frac{0}{0} \\ & \frac{3}{\bar{\omega}} \\ & \frac{0}{\omega} \\ & \frac{\pi}{0} \end{aligned}$ |  |  |  |  | Quality rating |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NEW ZEALAND PIGEON | 66\% | 48 to | 81\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | 000 | KERERŪ |
| GREENFINCH | 42\% | 24 to | 57\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 0 | ( | $\bigcirc$ | $\bigcirc$ | -0-30 |  |
| BELLBIRD | 34\% | 23 to | 46\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | (1) | $\bigcirc$ | $\bigcirc$ | -20 | KORIMAKO |
| MYNA | 9\% | -108 to | 43\% | $\bigcirc$ | $\bigcirc$ | 0 |  | - | $\bigcirc$ | $\bigcirc$ | 00000 | MAINA |
| TUI | 5\% | 1 to | 9\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 0 | $\bigcirc$ | $\bigcirc$ | 000 | KŌKŌ |
| HOUSE SPARROW | 2\% | -2 to | 10\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | 0 | $\bigcirc$ | $\bigcirc$ | - 0 - 0 | TIU |
| FANTAIL | -4\% | -9 to | 0\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 000 | PİWAIWAKA |
| BLACKBIRD | -4\% | -7 to | 0\% | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | (3) | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - ${ }^{\text {ene }}$ | MANU PANGO |
| CHAFFINCH | -23\% | -29 to | -17\% | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 0000 | PAHIRINI |
| DUNNOCK | -26\% | -34 to | -17\% | $\bigcirc$ | (0) | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - 0000 |  |
| STARLING | -41\% | -46 to | -35\% | $\bigcirc$ | ( | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 200 | TĀRINGI |
| SONG THRUSH | -43\% | -47 to | -39\% | $\bigcirc$ | (-) | $\bigcirc$ | 0 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 0900 |  |
| GOLDFINCH | -46\% | -52 to | -40\% | $\bigcirc$ | () | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 000 |  |
| Silvereye | -57\% | -61 to | -55\% | - | $\bigcirc$ | $\bigcirc$ | 0 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | -300 | TAUHOU |

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# 2018 30 June to 8 July 

Visit our webpage to learn more: gardenbirdsurvey.landcareresearch.co.nz

