

Study finds birdsong remains the same in forests after 1080 poison drops

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Claims that forests "fall silent" because birds are killed in such large numbers during 1080 poison drops are unsupported by newly released research by Te Herenga Waka—Victoria University of Wellington

scientists.

Aerial 1080 (sodium monofluoroacetate) operations control introduced mammals such as possums, rats, and stoats that prey on [native species](#), including [birds](#). The introduced mammals are also vectors of bovine tuberculosis and eat significant amounts of native vegetation.

Debate around continued use of 1080 often centers on its potential impact on non-targets, with some groups saying it kills large numbers of the very birds it aims to protect.

Associate Professor Stephen Hartley and Master's students Roald Bomans and Asher Cook, from the University's School of Biological Sciences, used bioacoustic monitoring to track the short-term general and species-specific trends of birdsong in treatment and non-treatment areas.

Their study was conducted for a five- to eight-week period before and after three different 1080 drops in the Aorangi and Southern Remutaka Ranges of the lower North Island in 2014 and 2017. Non-treatment sites in the Taraura and Northern Remutaka Ranges were studied for comparison.

The study's results are in the *New Zealand Journal of Ecology*.

Overall, the researchers found little evidence of short-term negative effects on native bird communities.

After the 2014 Aorangi operation, the mean prevalence of birdsong increased slightly in treatment sites, while it remained at near-identical levels in non-treatment sites during the same period. In the 2017 Aorangi operation, birdsong decreased in both treatment and non-treatment sites, but there was no evidence this was connected to 1080 in treatment sites.

In the 2017 Southern Remutaka operation, birdsong actually increased in treatment sites two to six weeks after 1080 was dropped, whereas birdsong decreased in non-treatment sites.

In all cases, both increases and decreases were minor.

Of nine native bird species studied for specific impact, five showed no impact, three showed increases in [birdsong](#) after at least one operation, and one (the tomtit) showed an increase, a decrease, and no change.

One [introduced species](#), the chaffinch, showed a very slight decline after one of the three operations, which might plausibly be linked to 1080, as this species is known to eat grains, and the toxin is delivered via cereal baits.

Interpreting the findings, Associate Professor Hartley says: "We know from previous work that most native New Zealand forest birds benefit in the years immediately following effective mammal control. This study confirmed that modern 1080 operations do not cause forests to go silent, and that few, if any, native birds are suffering short-term adverse effects. Regrettably, without appropriate control of introduced mammals, population declines and extinctions of Aotearoa's native and unique biodiversity will continue."

More information: undefined undefined et al. Bioacoustic monitoring of lower North Island bird communities before and after aerial application of 1080, *New Zealand Journal of Ecology* (2020). [DOI: 10.20417/nzj ecol.45.2](https://doi.org/10.20417/nzj ecol.45.2)

Provided by Victoria University of Wellington

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