Research in South Westland

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August 2015

The aim of the research being undertaken in South Westland is to assess the impacts, both positive and negative, of repeated 1080 use on forest birds. The study started in 2010 and is due to be completed by June 2016. The study has 2 main objectives:

1. To assess the impact of repeated 1080 use on a wide range of forest birds by undertaking bird counts.

2. To assess in more detail the impact of 1080 use on riflemen, kaka and moreporks. This detailed study involves the individual marking of birds with radio-transmitters or colour bands, assessment of their survival through 1080 drops and monitoring of their nesting success after 1080 drops.

In addition, the abundances of rats, mice, stoats and possums and the flowering of beech and rimu are being monitored to further explain changes in bird abundance, productivity and survival and to trigger appropriately timed 1080 operations.

The study has 3 main study sites with 3 different treatment regimes. The layout of the sites, and monitoring infrastructure are shown in Figure 1.

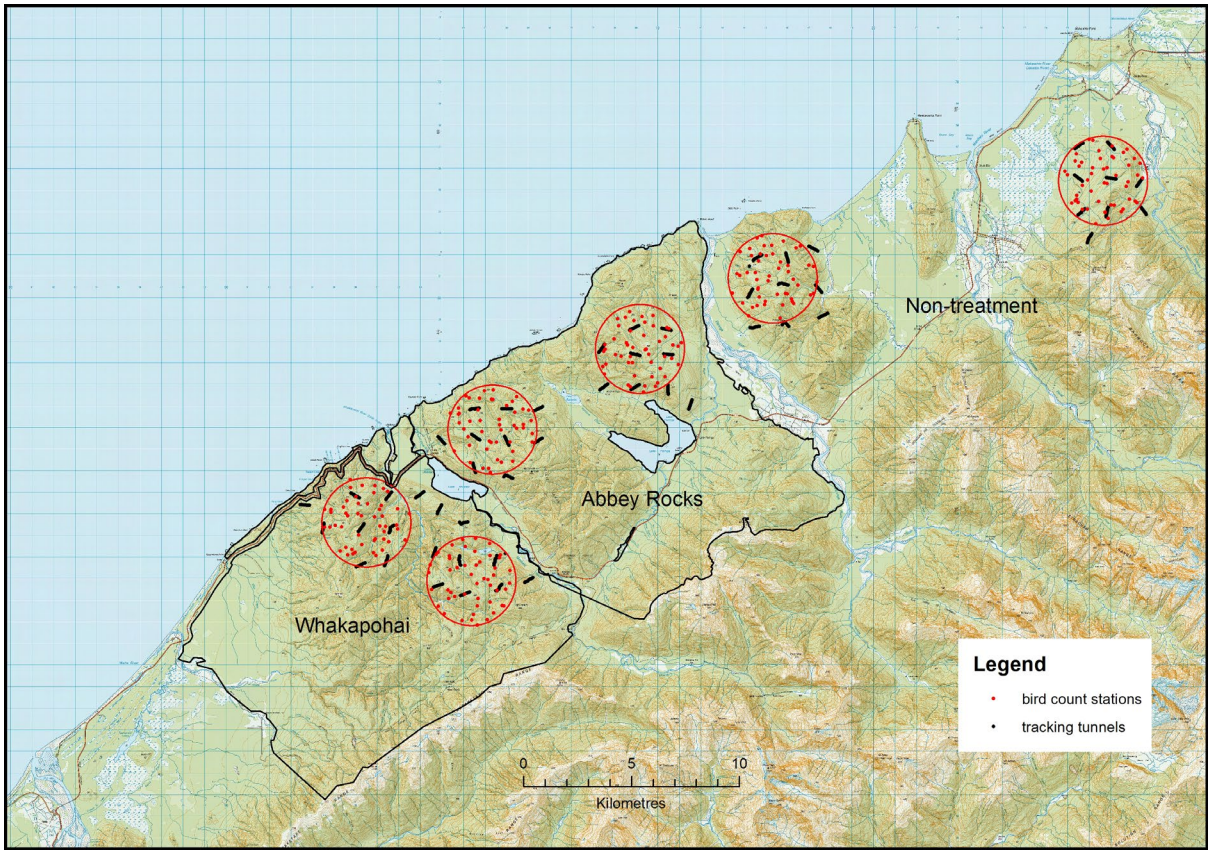


Figure 1: Study areas, tracking tunnels and bird counting stations in South Westland.

1080 treatment regimes for the blocks were initially conceived as:

1. The Non-treatment block would receive no 1080 treatment.

2. The Abbey Rocks block would receive 1080 treatment that was triggered by mast events or rat plagues.

3. The Whakapohai block would continue to get its programmed 1080 treatment that was triggered primarily by the abundance of possums.

Within 2 years of the study starting it became apparent that it would take a very long time to be able to usefully compare the effects on birds of a possum triggered 1080 regime and mast and rat plague triggered regime. As a result the focus shifted to assessing the effects of 1080 on birds within two years of an operation by comparing treated sites with comparable sites that had not been treated for two or more years. It also became apparent that there are two competing possible 1080 regimes that might be effective at protecting forest birds in South Westland forests:

1. Kaka focused 1080 operations that are undertaken in the spring preceding a beech or rimu seedfall. Kaka are only vulnerable to possums and stoats when they breed and they only breed in the springs preceding rimu and beech seedfalls.

2. Small forest birds 1080 operations that are undertaken in the spring following a beech or rimu seedfall. Many small forest birds are relatively unaffected by stoat and rats except when stoats and rats become very abundant in the spring and summer following a beech or rimu seedfall.

For the last few years the South Westland study has focused on attempting to compare these two competing 1080 regimes and to this end a 1080 drop undertaken at Whakapohai in the spring of 2015 provides an opportunity to assess another kaka focused operation.

Our focus for next summer, which will be the last season of field work, is to undertake bird counts and assess the survival and nesting success of kaka in the three treatment blocks.