Animal Health Board

Milestone Report

Project Code and Title	**AHB Project Code R-80734 (DOC Investigation 4166)** **Population dynamics of native wildlife at sites receiving aerial 1080 treatment to suppress predators – ecological costs and benefits**	
Research Leader/s	**Graeme Elliott**	
Milestone	**Report**	
Proposed Completion Date of Milestone: 1 August 2011		**Actual Completion Date of Milestone: 29/9/2011**
Value of Milestone: $ 125,000		**Invoice Attached : Yes/No**

Commentary (*to include results from sampling, highlights, problems etc*)

Bird Counting
Bird counting using digital audio recorders and people was undertaken in South Westland, the Marlborough Sounds and the Tararuas and completed by March 2011. 3600 recordings were made in South Westland, 2400 in the Marlborough Sounds and 603 recordings and 603 bird counts in the Tararuas.

All the recordings from South Westland and 50% of those from the Marlborough Sounds have been processed and entered in a database. All the bird counts done by people in the Tararuas have been processed and stored, but none of the Tararua digital bird counts have been processed.

We had planned to have all the bird counts processed by September each year. But this year we had bird counts to process from all three sites. I underestimated the amount of person-power required to do all three sites. We will have to catch up over the coming summer and following winter. As a consequence, no statistical analysis of the results has yet been done.

Rifleman nesting success
Rifleman nesting success was monitored at all three sites. In South Westland 30 rifleman nests were monitored, 18 in an area in which 1080 was used while the birds were nesting, and 12 in an area which was treated with 1080 some 18 months earlier. Nesting success was very high in both sites, which was expected as both sites had very low rat numbers during the breeding season. The benefits of 1080 should show in a year when 1080 is used and rat numbers are high – that will happen in the spring and summer of 2011-2012.

In the Tararuas 23 rifleman nests were found, 9 in an area that had been baited with 1080 more than a year ago, and 14 in an area that was very recently treated with 1080. As in South Westland, nesting success was high in both places. Also as in South Westland, this was expected as both sites had low rat numbers.

In the Marlborough Sounds 25 nests were monitored, 15 in a "non-treatment" area and 10 in a "treatment area". Nesting success was low in both areas and as neither has recently been baited with 1080 and both had moderate rat numbers, this was as expected.

Rifleman survival through a 1080 operation
In South Westland 36 riflemen were monitored through a 1080 drop in December 2010. None of them died. This is the first time rifleman survival has been monitored through a 1080 drop, so the "experiment" will need to be repeated a few more times before we can confidently say that riflemen are not killed by 1080.

Kaka survival through a 1080 operation
In South Westland we monitored 17 kaka with radio transmitters on them through the 1080 drop in December 2010. None died. There have now been 98 kaka monitored through five 1080 drops with no deaths.

Kaka nesting success
In South Westland during the summer of 2010-2011 we monitored 14 kaka nests with automatic cameras, 7 in an area that was treated with 1080 in December 2010 and 7 in areas that had not had 1080 for at least 18 months. Four of the 7 nests succeeded in the 1080 treated area compared with 3 out of 7 in the non-1080 treated area – not much difference. However in the non-1080 treated area we recorded 2 possums and a stoat preying upon kaka nests, while we recorded only a kea preying upon one kaka nest in the 1080 baited area.

Morepork survival through a 1080 operation
In August 2011 we put transmitters on 25 moreporks in an area in South Westland that will be treated with 1080 in October 2011 – we will monitor their survival through the drop.

Signed:  Date: 28 September 2011