

The Great White Butterfly Eradication Programme

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The first record of Great White Butterfly (*Pieris brassicae*) (GWB) in Nelson was on 14 May 2010 as caterpillars feeding on nasturtium. The property was 1.5km from the Port of Nelson where it was presumed to have entered the country. The GWB lays eggs in clusters of 30 to over 100 on host plants and caterpillars feed gregariously with the possibility of complete defoliation before moving en masse to neighbouring host plants. Overseas records show that GWB caterpillars feed on a broad range of species but mostly within the cosmopolitan family Brassicaceae (cresses). As well as brassica species grown commercially as crops, there are 79 species of native cresses, 92% of which are endemic and 71% are classified as "Threatened" or "At Risk" with 18 species being "Nationally Critical". Many of our endemics are known hosts for the small white butterfly (*Pieris rapae*) and overseas records show an overlap in the host range between the two butterfly species. The arrival of the GWB represented a significant additional threat to many endemic cresses. In November 2012 the Department of Conservation (DOC) took over the response initiated by the Ministry for Primary Industries (MPI). The 2012-2013 season saw GWB spread out to a maximum of 12 km, both north and south, from the Port. However, by late autumn 2013 the distribution had been reduced to about 7 km from the Port and this was maintained through to mid-2014. Computer modelling has facilitated a targeted approach to particular life stages at certain times of the year. This has maximised the efficiency of the available resources leading to a massive decline in GWB counts over the spring - summer period of 2014-2015. The programme appears to have achieved "knock-down" and entered the "mop-up" phase. But how close are we to eradication?

