



7										
8										

New stations were placed in the reserve on 26/07/07 to allow them to weather and allow rodents to become accustomed to their presence. The stations had some peanut butter placed inside as pre-feed to attract rodents and poison was not yet laid.

All stations were not baited until 09/08/07, and after 3 weeks of recording bait taken data, we can see a significant drop off in average bait taken (Figure 2). For example line 3 saw an average take of 74% at 16/08/07. The following week saw the take decrease to 14%. One anomaly in the downward trend is on line 6. This line has had a high amount of bait taken, 100% from all 8 stations on 22/09/07 and 95% on 27/09/07. This could be due to the large amount of non-pest controlled bush the line is exposed to on its eastern flank (Figure 1). Therefore a larger number of rodents are likely to take the bait from this line.

Line 1 is also in a similar situation (exposed western flank), although possum interference on this line makes some results void as we cannot count stations that have been overturned by possums. However a decrease in bait taken has still been recorded here.

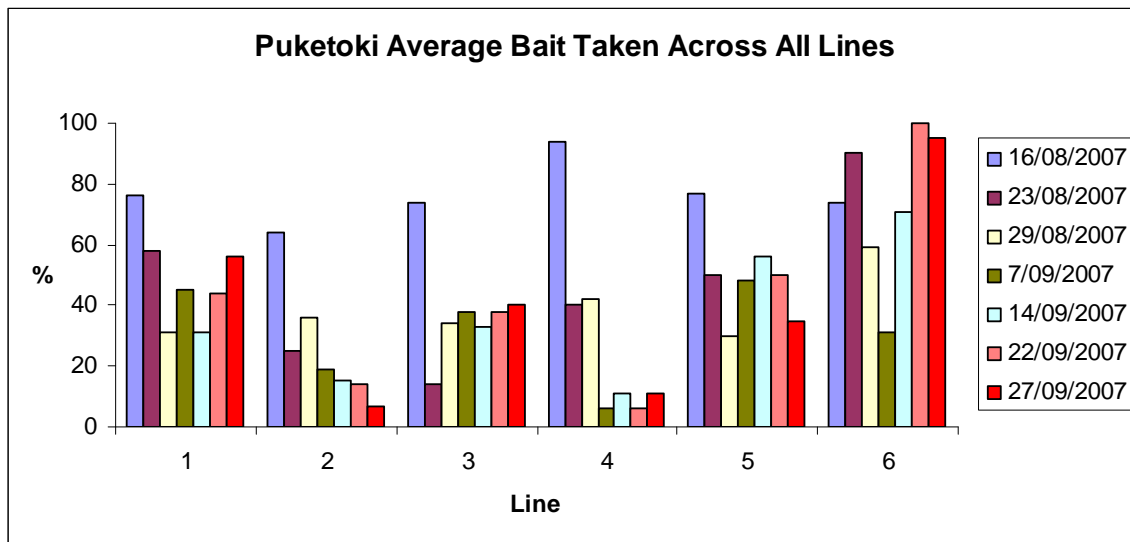


Figure 2: Average bait taken across all lines

Overall the amount of bait taken has shown a general decreasing trend, especially in the central lines (2, 3, 4 & 5) as the likelihood of rodents populating this area would be lower than the more exposed flanks (Line 1 & 6). On the whole it can be surmised that the rodent

control programme is having a declining effect on the rodent population.

## Rodent Tracking Results

16 tracking tunnels were placed in central locations which all lines crossed. This would allow maximum coverage of the area and provide accurate recording. The tracking was begun 02/08/09, 6 days before all six lines were baited with poison.

Rat numbers have fallen significantly from an initial 81% of tracking tunnels recording rat presence, down to just 6%. It can be concluded that the poison baiting is having a detrimental effect on rat numbers.

The mice population has however remained fairly steady with 37% at the beginning of the trial, to 31% after 6 weeks. Reasons for this are currently unknown.

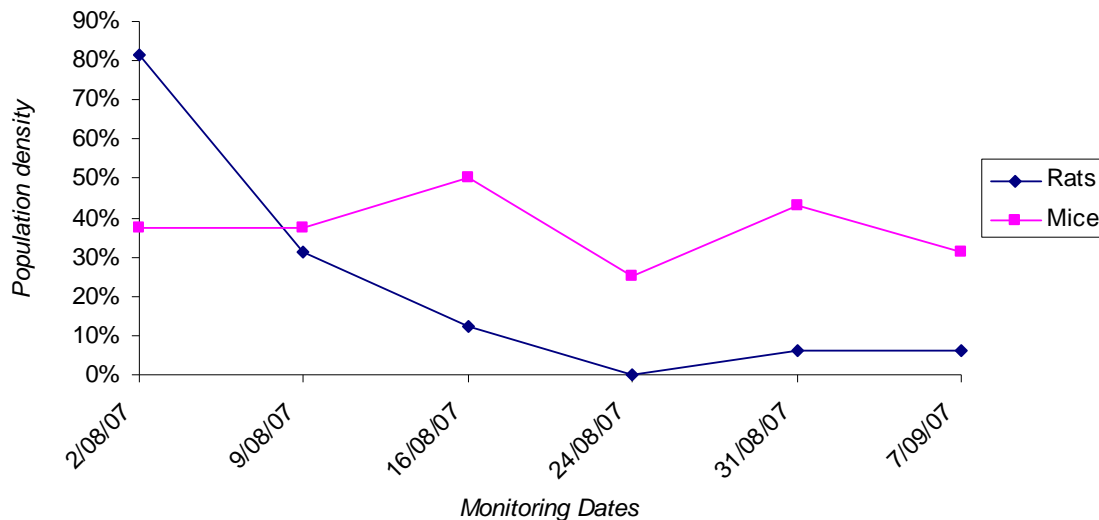


Figure 3: Rodent tracking results at Puketoki

## Ditrac/Rat Abate Preference Experiment

On 02/08/07 lines 1, 3 and 5 were baited with Ditrac in the older tube stations (Figure 4) and Rat Abate in the new tunnel bait station (Figure 5). The stations were placed in close proximity to each other with the aim of recording rodent preference between the two.

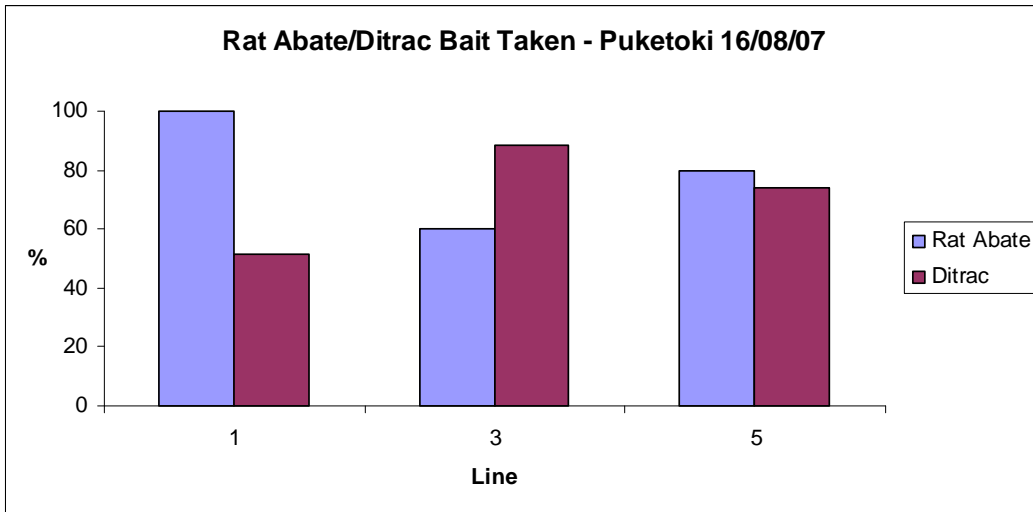
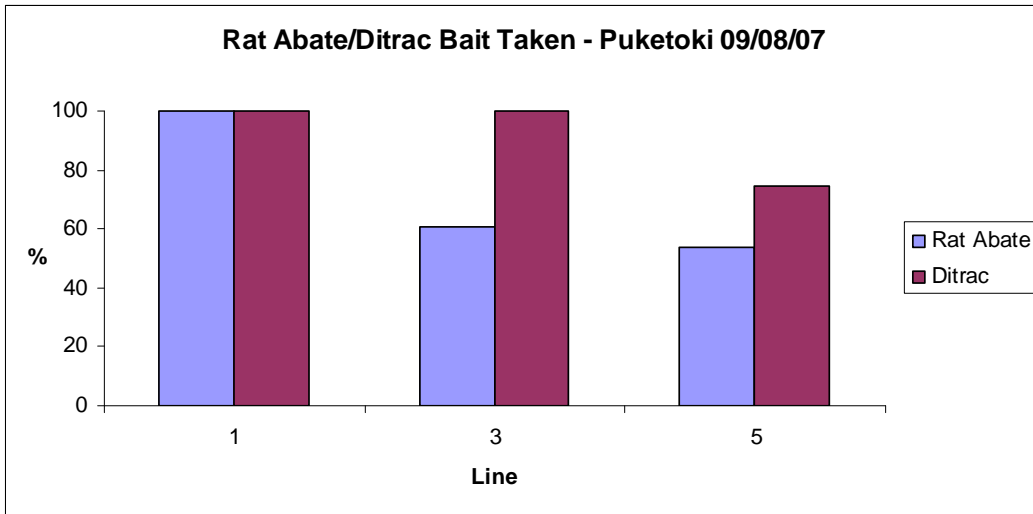


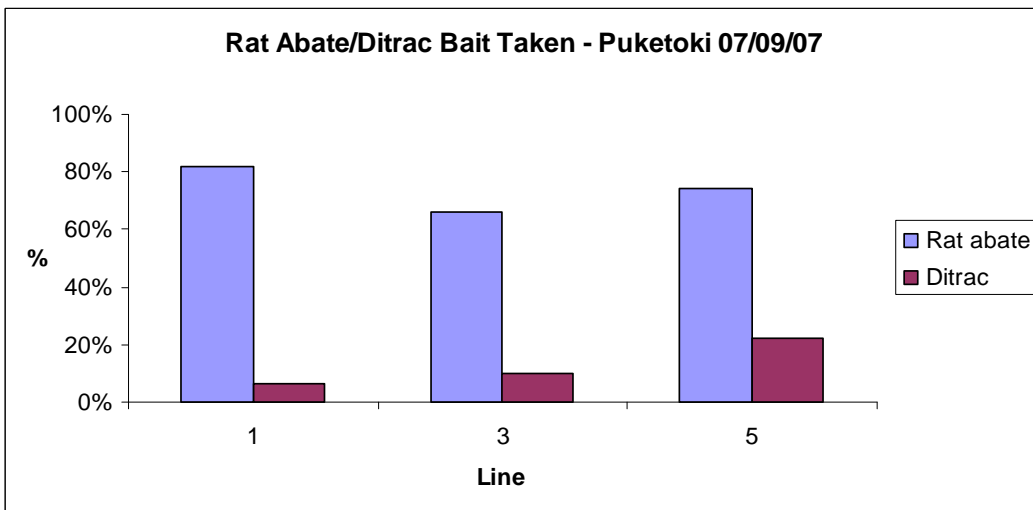
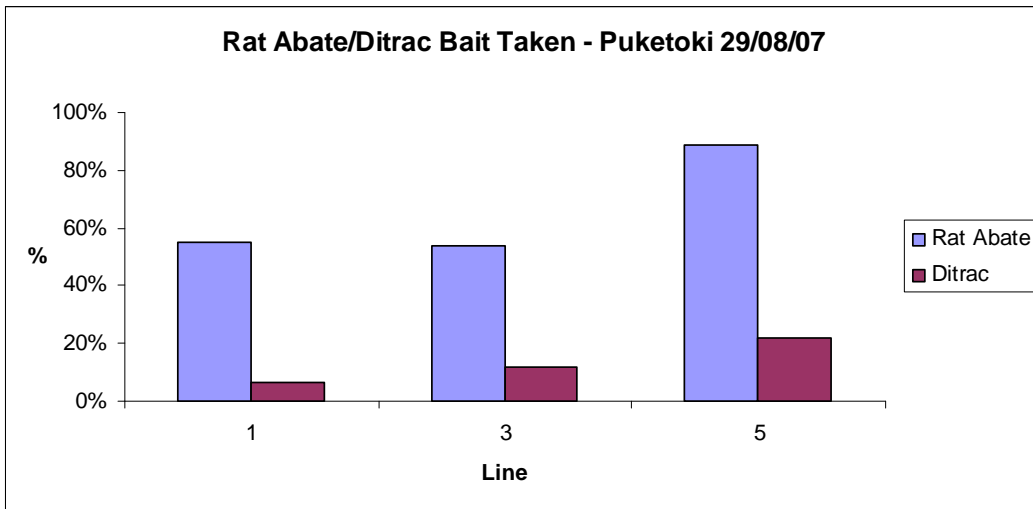
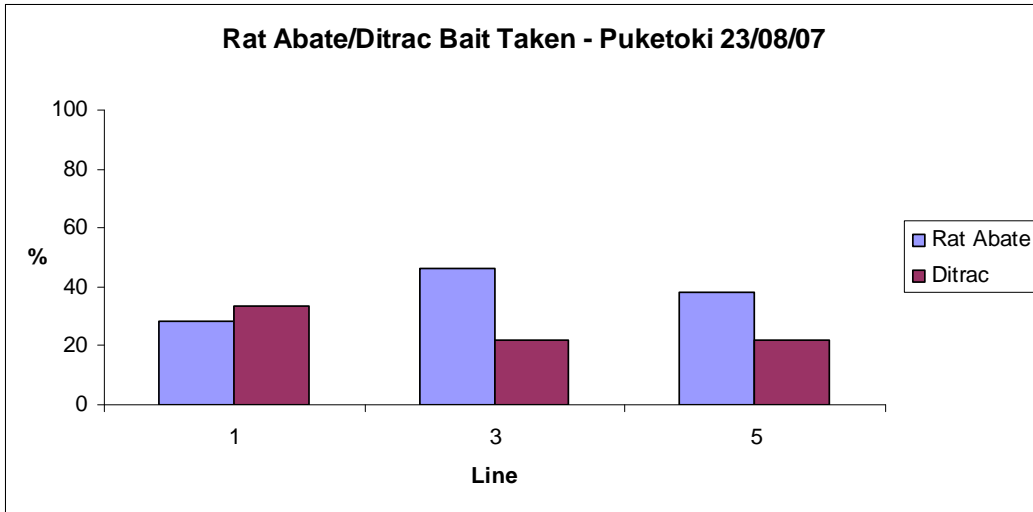
Figure 4: Tube station with Ditrac

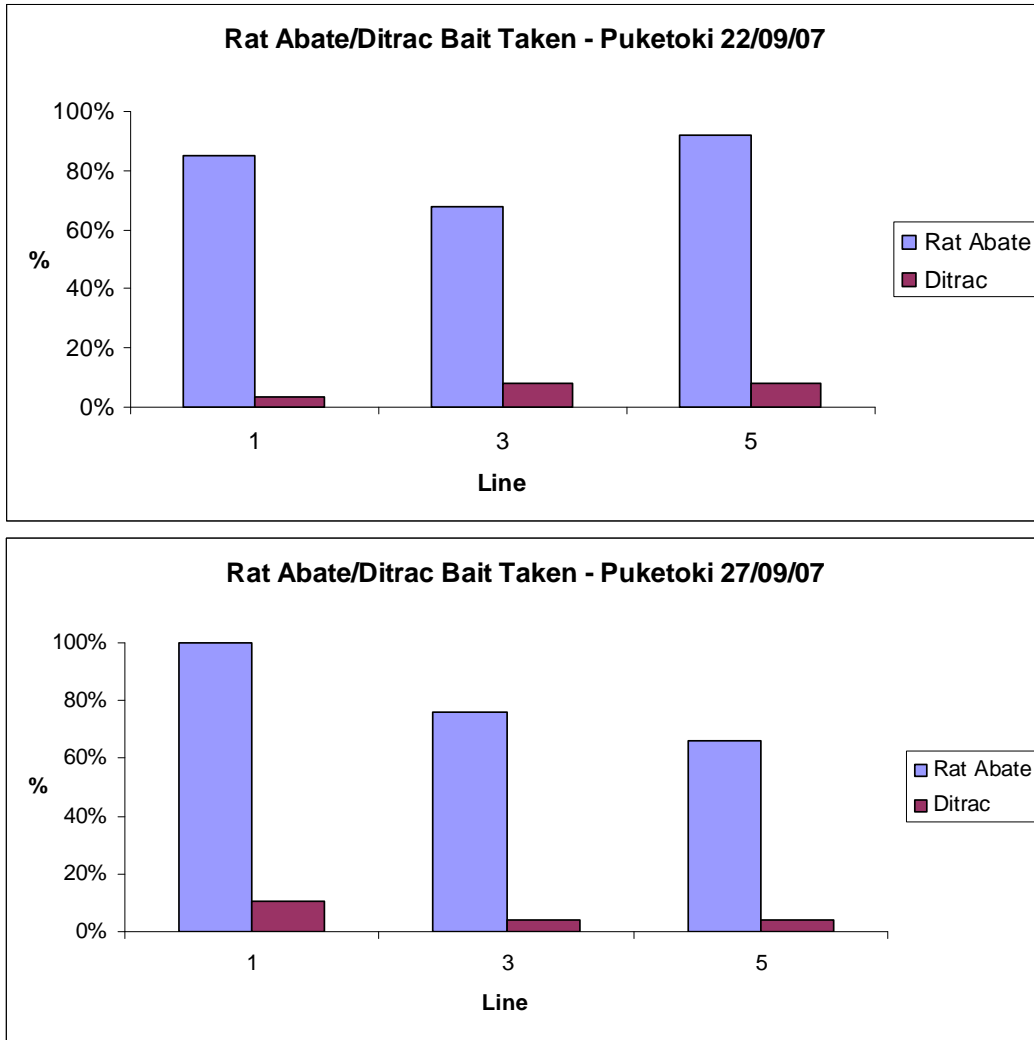


Figure 5: Tunnel bait station

Results of the preference study can be seen below in figure 6.







**Figure 6: Ditrac/Rat Abate preference across 3 lines**

Initially it would seem that Ditrac was preferred (09/08/07). However, over the next two weeks the preference results are fairly even. Lines 3 and 5 seem to show the most consistent patterns, probably because they are centrally positioned in the reserve. Line 1 has been more exposed to possum interference to the Rat Abate stations, thus perhaps distorting figures. 23/08/07 sees a more clear preference occurring for the Rat Abate. From 31/08/07 to 27/09/07 a very positive preference for Rat Abate begins to be established. In fact in the last week of bait recording (27/09/07), the difference in bait eaten between the 2 poisons is 89%, 72% and 62% respectively. It can be concluded from this trial that there is a strong preference by rodents for the Rat Abate poison than for the Ditrac poison.

## **Possum Control**

Initially no direct possum control measures were taking place at Puketoki. Rodent bait stations were continually being found disturbed and investigation of these occurrences pointed to possum interference (Figure 7).



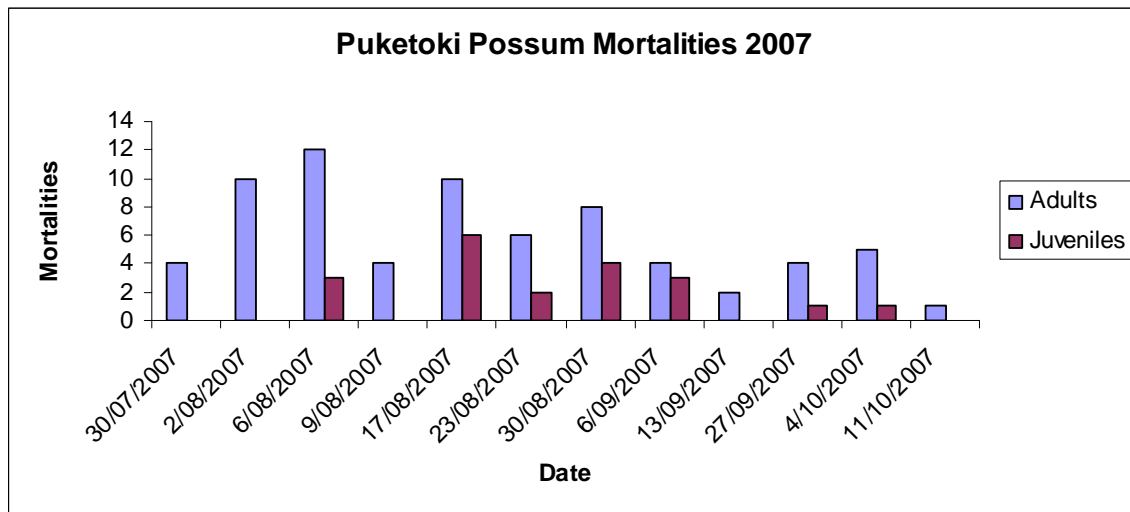
**Figure 7: Tracking pads showing possum prints.**

After consultation with various experts and in conjunction with Connovation Ltd, the community group were supplied with and trained in the use of warrior kill traps (Figure 8).



**Figure 8: Trap setting demonstration by Connovation Ltd.**

39 traps were affixed to trees across the 6 lines and the kill record of possums began 30/07/07. Initially volunteers were visiting the site frequently to attach and set more warrior traps. By 09/08/07 they began weekly checking and data gathering of the traps. Both adults and juvenile (including young and joeys) possum deaths were recorded by the Puketoki group (Figure 9).



**Figure 9: Total possum mortalities at Puketoki Reserve 2007**

The possum trapping is regarded as being very successful. Initial high trapping rates are recorded with an easing of the mortalities. It can be concluded that the resident possum population has been reduced and the numbers are expected to trail off even more significantly. This coincides with a decrease in the number of rodent bait stations being interfered with, presumably because of a lower possum population. Future possum control planning involves the idea of perimeter trapping to prevent colonisation of the site by new recruits. This would entail traps positioned in likely possum run sites, including vegetation corridors leading to the reserve.