

Mason Bay Project Report 2013 -14

A collaborative Project between the Southland branch of the NZ
Deerstalkers Association and DOC Stewart Island Field Centre



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1. Background

The Mason Bay trapping network is a co-operative project between the Southland Branch of the NZDA & DOC Stewart Island Field Centre.

For the past seven seasons NZDA volunteers have run a rat control network during the bird breeding season, with the aim of **increasing the productivity of native birds by reducing rat numbers at this crucial time of the year**. The trap network was first run in 2006 and was expanded in 2008, with a further 52 traps added. In 2009 the Kiwi line was added, bringing the number of traps up to 309. The traps require ongoing maintenance, which is carried out during the season by the NZDA trap check teams.

Last season the scope of the project was expanded to trial possum control in order to further improve the forest habitat. Bird monitoring was also trialled for the first time last year, with the aim of obtaining baseline data about forest bird populations within the trapped area.

2. Goodnature self re-setting Possum Trap Trial

Please refer to the 2012-13 report for detailed background information on this trial.

Due to a large proportion of the original batch of traps having gas leaks, all traps were replaced in August 2013, just before the first trap check of the season. Goodnature kindly replaced the traps at their own expense. The new traps look more or less identical to the original ones, but Goodnature have advised that in the 12 months since our trial began almost all components of the traps have been updated as a result of feedback from field trials.

The NZDA teams have continued to re-bait and monitor the performance of the traps during the season. Table 1 summarises catches for the season.

August	Sept trip 1	Sept trip 2	Oct	Nov	Dec	Total
4 (3)*	7	16	3	10	4	44 (47)

Table 1 – possum catches 2013-14 *Three possums were also caught in the traps during the change-over of the traps in August 2013.

	Fenceline	Stalker	Inner Spiral	Rimu	White Ghost	Bay	Cat	Hunters	Duck Creek	Big Sandhill
No. of catches	10	0	3	2	1	1	6	0	8	13
Average over line	0.53	0	0.11	0.5	0.25	0.3	1	0	0.8	1.6

Table 2 – possum catches per line 2013-14

Discussion

Only 2 traps were reported as leaking during the season (PF18 & BS1). Four gas bottles were replaced and 2 traps were noted as having no gas and have not yet been replaced (IN14 & IN15). Two traps have been reported as missing (IN3 & IN24).

The number of kills was similar to last season (47 this year compared to 41). Table 2 presents the distribution of catches by line. Catches were generally higher on the outer parts of the grid, e.g. averages of 0.53 and 1.6 possums per trap for the season from the Fenceline and Big Sandhill lines, compared to 0.11 from the Inner Spiral. Catches were also relatively high in the tall forest

along the Cat line. The tendency for higher catches on the edge of the grid might indicate that we have reduced possum numbers in the inner part of the grid and are generally catching animals that are moving in from outside. The possum population (RTC) monitoring that was run prior to setting up the trap network in August 2012 (see 2012-13 report) would need to be repeated in order to establish whether the trap network is really effective.

A notable peak in catches occurred during the 3rd trip of the season (see table 1). I discussed this with the trip leader Dave Asher, who stated that his team had squirted an aniseed mix into and around the traps. This may well have been the cause of an increase in catches during the trip and it is worth noting as a change in bait is often considered as an effective strategy for increasing catches at fixed trap locations.

Teams should continue to throw dead possums away from the trap into the bush after recording the kill on the trap sheets. This will ensure that possums are not counted twice. Any faults or missing traps need to be recorded and a record also needs to be made each time a gas bottle is changed. If further information is required about these traps please refer to last year's report or contact DOC Stewart Island.

3. Rat Trapping Results from the 2013-14 season

Chart 1 below summarises captures for each trip this season. Chart 2 presents the same data as compared with captures since 2007.

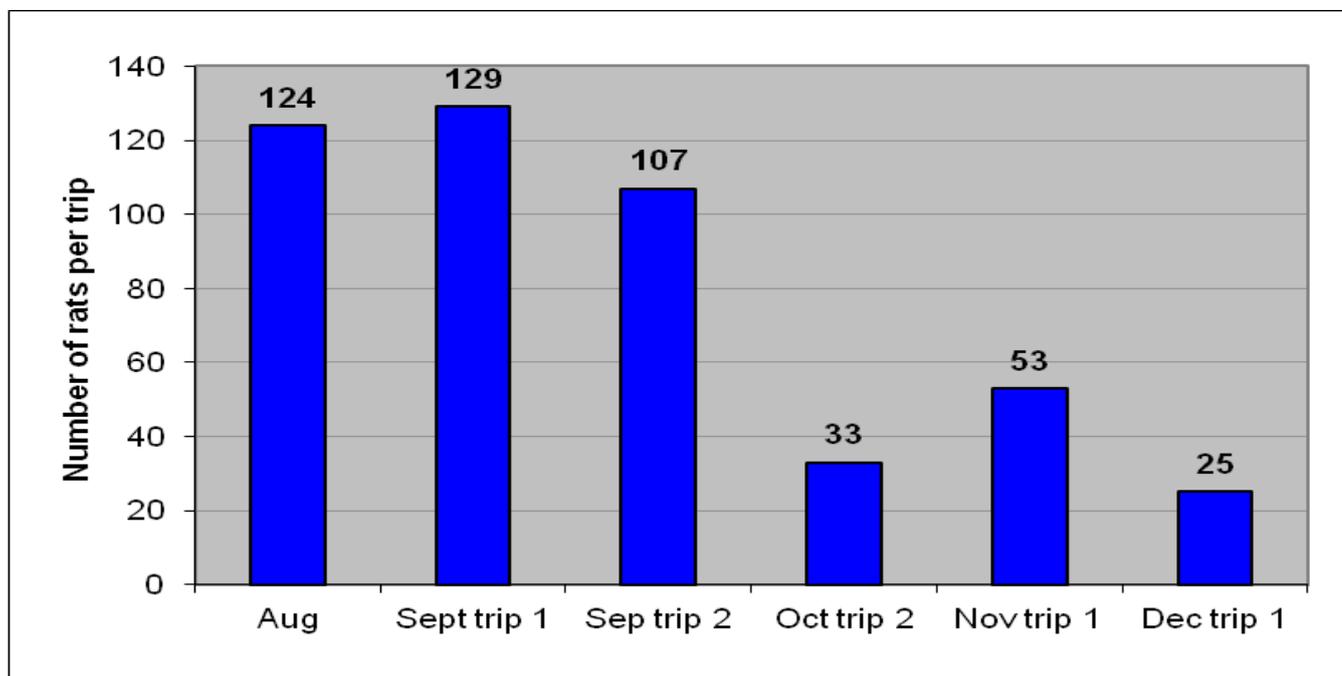


Chart 1; Total rat captures per trip, 2013.

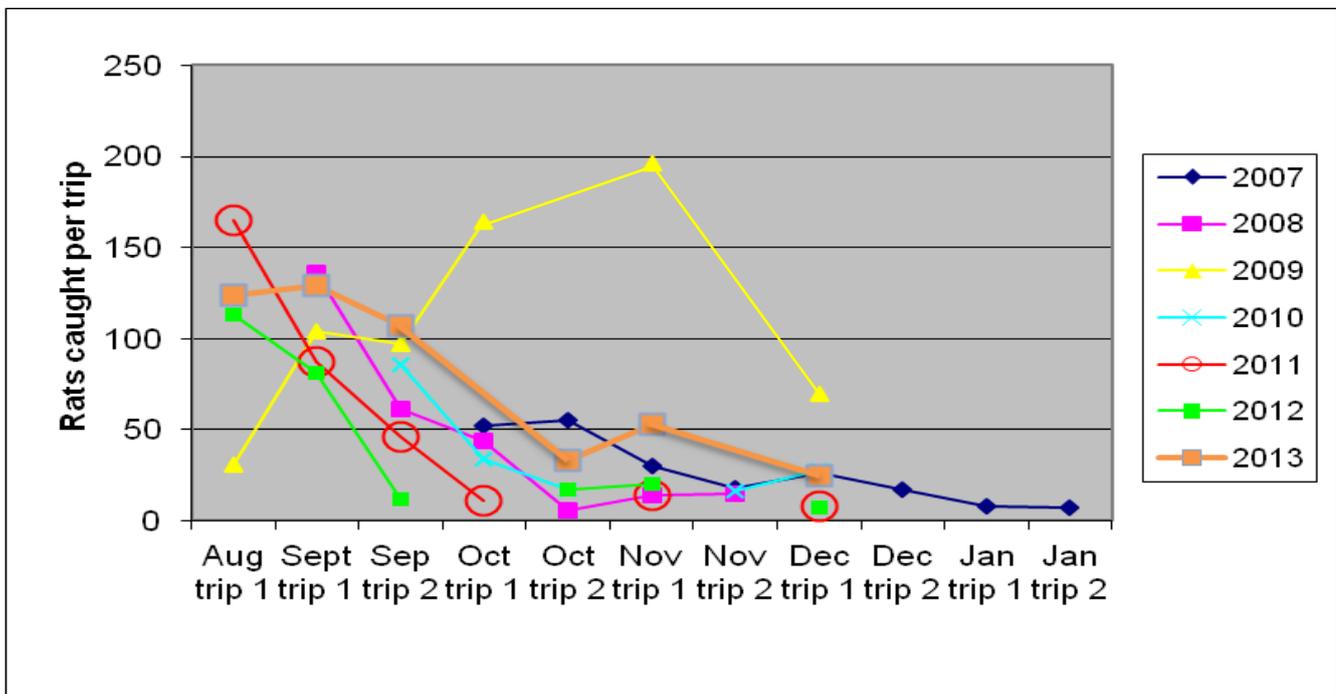


Chart 2; rat captures per trip, 2007-2013

Chart 3 compares this year's total catch with total catches over the last 7 years. A total of 471 rats were caught this season, the highest catch since 2009 and the 2nd highest catch since the project began. The captures per trip (Chart 1) show that rat numbers were very high in early spring, with another smaller peak of catches in November. High rat numbers have been noted elsewhere on the Island this summer, and the situation is likely to get worse depending on how heavily the podocarp trees fruit this autumn. It is pleasing to see that despite the obviously high background numbers of rats this season the trap network was able to bring rat catches down to low levels by mid spring and as in past seasons, (see Chart 2), the project appears to have achieved the goal of reducing rat numbers in the trapped area during the bird breeding season.

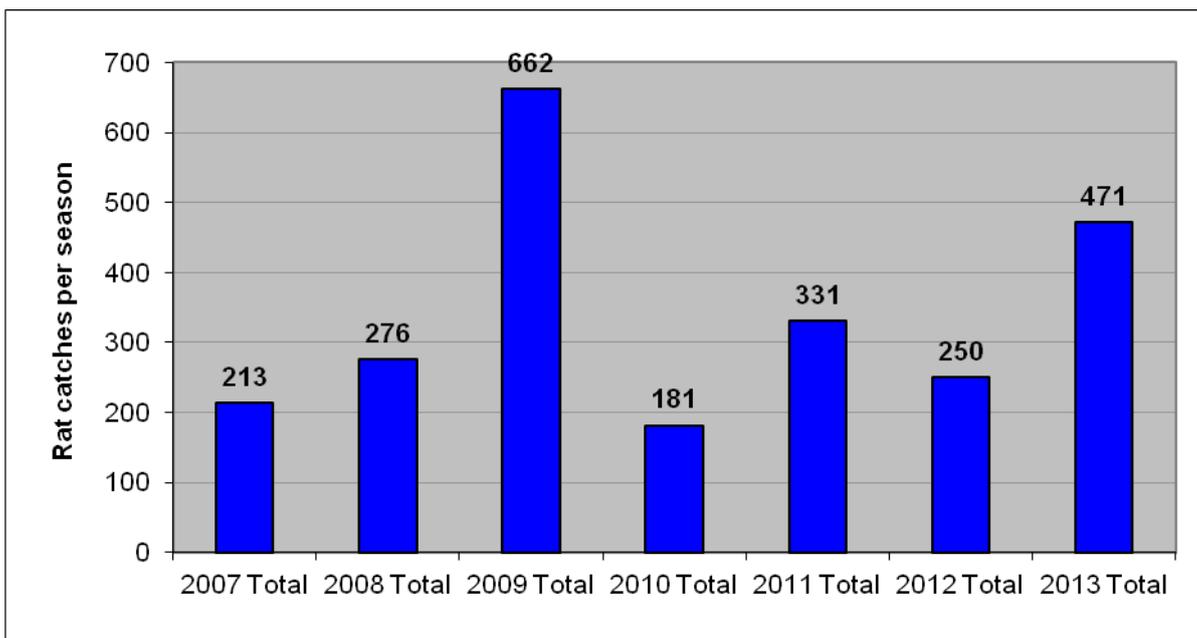


Chart 3; Total rat catches per year, 2007 - 2013

Feral Cats

In August 2013 5 prototype Goodnature self re-setting cat traps were deployed around the rat trapping grid. These traps are still in the design stages; they are based on the possum trap but are tailored for cats and use a long-life meat based bait. Trail cameras were used to monitor animal interactions with the traps. The traps and cameras have now been recovered by DOC staff and the information is being analysed. More information will be available on request from DOC Stewart Island.

Bird Monitoring

Bird monitoring was undertaken by the trap teams for the second consecutive season, in order to create a baseline dataset to be compared against future seasons. See the 2012-13 report for background on the bird counting method used.

Each of the teams undertook bird monitoring whilst carrying out trap checks this season. The data is on file and will be entered into a spreadsheet with last season's data to continue to build a baseline dataset of bird populations around the trapping grid. The number of Tuis seen this year was particularly noteworthy, e.g. 60 sightings of groups of up to 7 birds on the September 28th to October 7th trip.

Conclusions and recommendations

Some recommendations for next season;

- Trial different baits in the rat traps. John De Lury reports that rats really favour the orange possum paste. It might be worth trying this (or something similar) in alternate traps (with peanut butter in every other one), to see if a noticeable difference in catches occurs.
- A scent lure on the possum traps, such as the aniseed used on the 3rd trip of the season, might be worth trialling again. Again squirting alternate traps and recording the results would give some confidence in the outcome of a trial.
- When recording birds teams should make sure that they record numbers consistently e.g. recording numbers of birds for part of the day and then making a comment like "plenty of bellbirds between IN5 and IN 20" will not be of much use when we come to analyse the bird data. Numbers are required for the method to be effective – if groups of birds are seen then it is acceptable to make a best estimate of numbers present.

Thanks to all the teams for another fantastic effort this season. On a personal note, it has been a great pleasure to be involved in the project since 2010. I am now based back on the mainland but I will continue to have an interest in this valuable project, and I hope to get the chance again to spend some time at Masons with an NZDA team.