

Ashley/Rakahuri Estuary Predator Trapping Group

First Semi-Annual Report

June 2018 – January 2019

1. Introduction

This group was an initiative of Nick Ledgard and BRaid. Aims were to protect the birds that occupy the estuary and nest in the area and to provide the necessary trapping coverage that would be required for a possible release by DOC of the black stilt (kaki). This programme is part of a long-term ambition to install traps along the Ashley from the Okuku confluence to the estuary and thence to the Waimakariri mouth. Trapping in the latter part of this area is managed by the Tuhaitara Coastal Park.

On 28 October 2017 Sonny Whitelaw of BRaid organised a trapping seminar at Woodend to attract volunteers for the trapping group. This was well attended and resulted in enough volunteers for the project. Stuart Poore agreed to lead the group. This group has a strong but informal relationship with the Ashley/Rakahuri Rivercare Group - ARRG.

Every year the trapping results of the ARRG are reported twice – for the nesting season (“summer”) of 1 August to 31 January, and for the “winter” season from 1 February to 31 July. The estuary group will follow suit with this. However, this first report covers results from the first installation of traps (23 June 2018) to 31 January 2019.

2. The Estuary

The estuary is fed by the Ashley River and by Saltwater Creek. The main part of the estuary and associated tidal flats is elongate north-south and is about 2.4km by 0.7km in area. At low tide more than 90% of this is exposed. A long narrow (100m wide) finger of estuary stretches another 2.6km northward from here to the Ashworths Ponds. It is uncertain how far tides penetrate upstream in the Ashley River.

The estuary is bounded to the east by sand dunes. North of Saltwater Creek a marginal strip of pine forest separates mud flats from farmland to the west. From just north of Saltwater Creek to the Waikuku settlements there are often several hundreds of metres of marshy vegetation – grass and various shrubs. Parts of this area can be submerged during floods. Several pine trees also occur here and there are some small recently planted areas of native trees and shrubs. Willows, poplars and pines line the river bank westward to State Highway One.

3. The Birds

The Ashley estuary is an internationally important wetland which hosts migratory national and international (e.g. bar-tailed godwit) species as well as permanent residents. Over 90 species of birds have been recorded (<https://braid.org.nz/braided-rivers/ashley-river/>). In recent years a single kaki has been often seen. A Birds New Zealand 5 December 2018 survey in the estuary resulted in 348 birds counted (including 320 waders) – this count did not include black-backed gulls which could have numbered in the hundreds. Only L. Ellesmere had a higher count of wader species, but due to the large size and difficult access to that lake, ornithologists wanting to see a range of different species always go first to the Ashley estuary.

Native birds that nest here include white-fronted terns, banded dotterel, pied stilt, variable and pied oystercatcher, pied and little shags, and unfortunately black-backed gulls. Other braided river bird species that nest further up the Ashley gather in the estuary before and after the breeding season. Significant numbers of wrybill adults can be seen here before they proceed up the river to nest. After nesting small flocks of fledgling wrybill, black-fronted tern and black-billed gull are often seen in the estuary.

Birds are particularly vulnerable to predation when breeding and at high tide when the mudflats on which they rest shrink very close to areas of vegetation.

Black-backed gulls are developing into a major problem in the estuary. For some years there has been a nesting colony south of the Saltwater Creek confluence, and in the 2018 – 2019 season there was also a colony on the sand dunes northeast of Saltwater Creek. At least 200 adults were seen here around Christmas. These gulls constitute a potential major threat to other birds that nest in the estuary and up the river. Elsewhere on Canterbury braided rivers, excessive black-backed gull numbers are being controlled by poisoning and shooting – this may well need to be undertaken on the estuary.

4. The Traps

On November 29, 2017 a planning session was held involving members of the Ashely/Rakahuri Rivercare Group (ARRG), DoC, ECan and prospective new trappers. It was decided to space traps at 100m intervals along the margins of the estuary. Traps were to be mainly DOC 200 with approximately 20% Trapinators to target feral cats. Trapinators were to be placed only on the north side of the river to avoid catching domestic cats. Other target species were hedgehogs, rats and the mustelids. Recommended checking frequency was every 2 weeks during the summer / autumn; once a month over winter.

DOC trap boxes were made on May 19, 2018 by estuary group and ARRG volunteers in one very productive session. Funding for the traps was provided by DoC.

The bulk of the DOC 200 traps were emplaced over two weekends – 23 and 24 June 2018 and 30 June – 1 July 2018. The Trapinators were later installed mainly by the individual trappers over a period of a few weeks. In late 2018 it was decided to install traps either side of the river as far west as State Highway One. This was done between 26 and 29 January 2019. These traps were not checked during the report period. Funding for these traps came from the ARRG.

Because of the heavy human presence in the area, especially during the white bait season, the traps were well hidden, labelled with danger signs, and the lids were firmly screwed down (Figure 1). Some of the DOC 200 traps are vulnerable to flooding, so all were tied with string to permanent vegetation – this is as per ARRG standard procedure. Trapinators were screwed to trees (Figure 2). To date no traps have been lost to floods and very few have been damaged by people. Two Trapinators have been broken, one by a large possum, the other perhaps by people.

As of 31 January, there were 137 traps including 14 Trapinators (Figure 3.). These have been laid out in 10 lines, named A to J, with traps labelled A1, A2 and etc. Traps are approximately 100m apart along the shoreline. In some places Trapinators have been positioned close to DOC 200 traps.



Figure 1. Concealed DoC 200 Trap



Figure 2. Trapinator & DoC 200 Traps

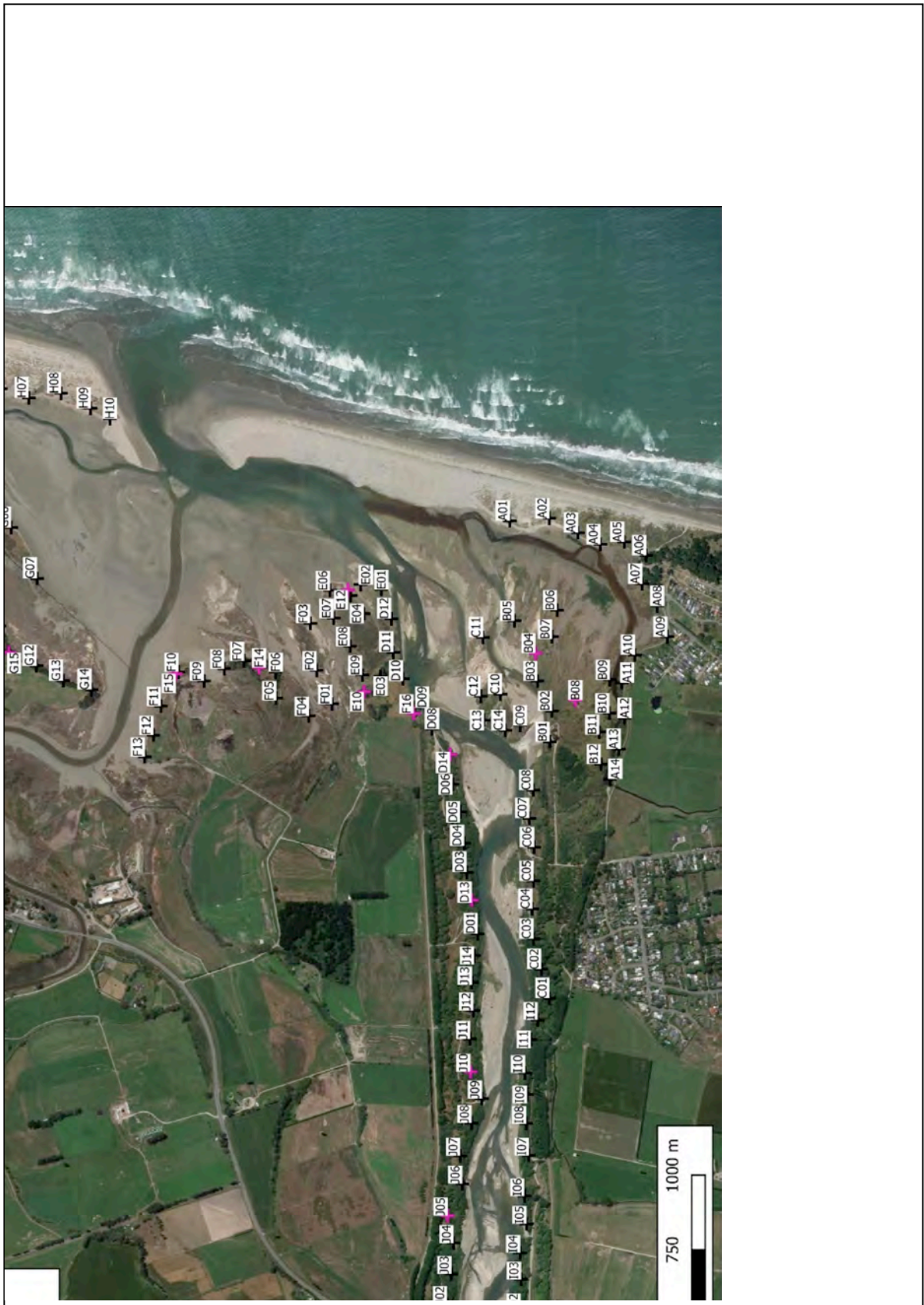


Figure 1. Trap Layout

DOC 200 traps are baited with eggs – which are changed approximately monthly. To date the eggs have been provided by Benzie Eggs and distributed through Geoff Swailes and Stuart Poore. Any other bait in these traps is left to the discretion of the trappers. This can include such things as cat biscuits, curry powder, meat and cheerios. Trapinators are baited with fresh meat or cheerios. Cheerios are very suitable for this purpose, they fit perfectly on the spike of the trap and over time harden about it. However, when on TIMMS traps along the river, they tend to disappear quite quickly, perhaps eaten but mice.

5. The Volunteers

There are currently 9 volunteers (see below) with 2 more to be arranged to check the new lines down from SH1. This group has been excellent. There have been no drop-outs, all lines are being regularly checked (Figure 4) and results are promptly reported by email.

Line	Trapper
A	Rob Salisbury
B	Grant Davey
C	Nicola Surtees & Eva Ting
D	Belinda Reynolds
E	Beryl Wilson
F	Alec & Helen Doig
G	Stuart Poore
H	Stuart Poore

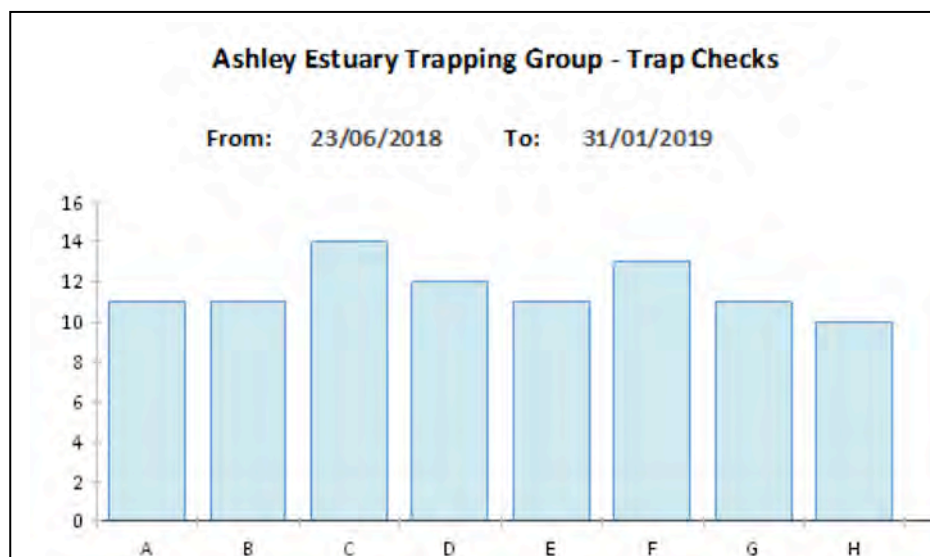


Figure 2. Trap checking frequency

6. The Predators

Trap details and predator catch are recorded in a purpose-built MS Access database. This allows very rapid collation of data. In future data from the ARRG river trapping is going to be incorporated into this database. Results are presented on maps created with QGIS. Trap locations are overdue to be appended to the DoC system.

A total of 87 predators were caught in the period up to 31 January 2019. Figure 5 shows that the main predators caught have been rats (37) and weasels (34). Ten stoats, 4 feral cats, and just 1 hedgehog and 1 ferret have been caught. In addition to the main target species, 16 mice and 2 possums as well as a rabbit have been caught.

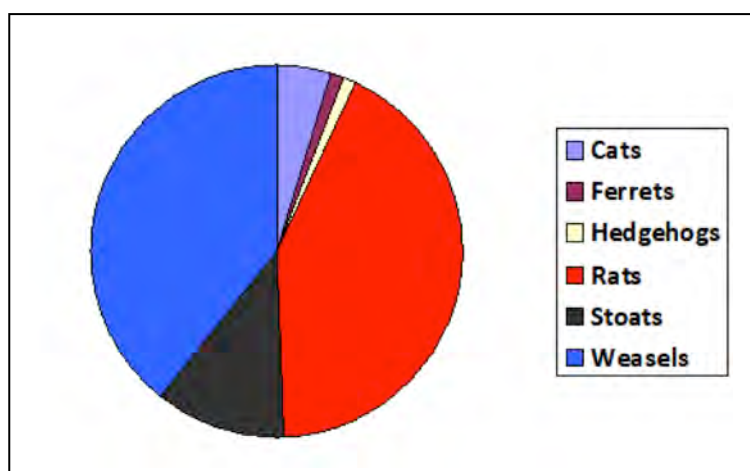


Figure 3. Predators caught

The overall catch per hundred trap nights in the report period was 0.37 – this compares with 0.43 for the Ashley River traps in the nesting season. Figure 6 shows how this has varied with time, with the July rate of about 0.45 decreasing to about 0.2 in October and increasing to almost 0.6 in January. Analysing this information monthly could however be a little misleading as, for example, checking a line on 30 June as opposed to 1 July could significantly change the figures.

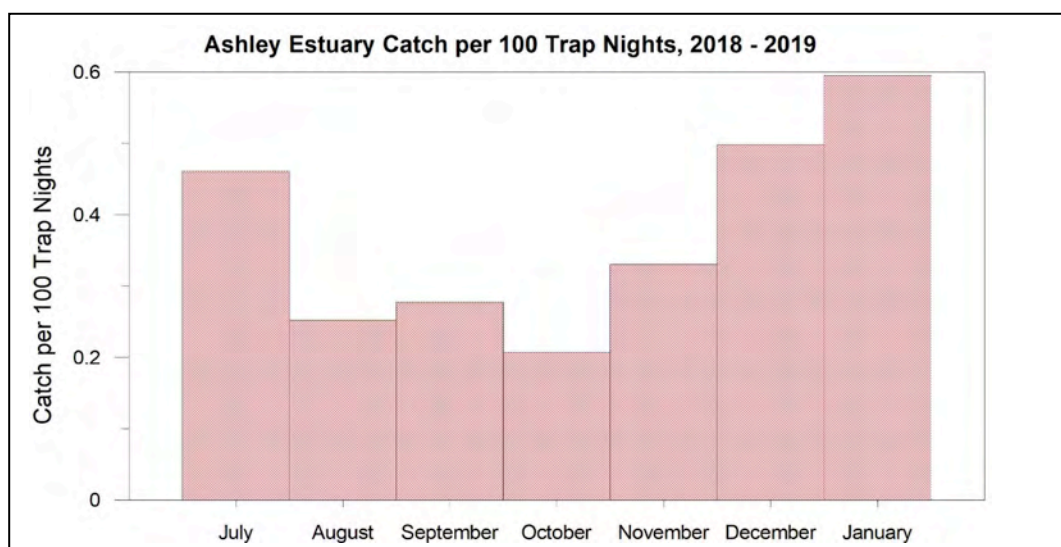


Figure 4. Catch per hundred trap nights

Line G (Figure 7), north of Saltwater Creek, has been by far the most productive with 27 predators caught. This line is largely along a narrow belt of trees which separates the estuary from farmland. The high catch is very likely due to abundance of predators here rather than to bait used or any other such factor. A trail camera used at G15 for more than 3 weeks took 36 photos of hares, rabbits, blackbirds, thrushes and a kingfisher. Perhaps there is more such prey on this line than elsewhere. The other lines caught from 5 to 11 predators with the least productive being Line H along the sand dunes north of the river mouth.

Line G also had the greatest variety of predators with at least one of the 6 main species caught. Five lines only caught two species, mainly rats and weasels.

The most productive trap (Figure 8) has been G7 with 5 catches, all weasels. Only 1 trap on this line hasn't caught a predator. Surprisingly the most productive trap on Line H, which runs along sand dunes, was the southernmost (H10) which has caught 2 rats and a weasel. Also, surprisingly one of the most productive traps on Line A was the northernmost one, again in sand dunes, with 2 weasels. It was wondered, when installing the traps, whether there would be predators in the sand dunes. The western 6 traps on Line A have not caught a predator. This is surprising as there is good cover along the edge of the water and good tracks for predators to move along.

Several traps on Lines B, C and E, mainly in grassy and marshy areas, have not caught a predator.

Some comments on predator species:

Feral cats – these have only been caught in Lines B and G – in August, September and October. Two cats were caught in the same trap (B14) on consecutive days in September using cheerio bait. It doesn't appear likely that we have caught all the cats in the area, so some thought is required as to why none have been caught in recent months. Maybe we should try different bait or trap locations, more traps?

Ferrets – only one caught in the period, not surprising as few are caught along the river by the ARRG. Since the end of January, 2 more have been caught in Line D at the estuary.

Hedgehogs – very surprisingly only 1 was caught in the entire period – it seems unlikely that they are uncommon around the estuary. Hedgehogs are often the most abundant predator caught along the river, but their catch here has also been low over this period. The reason for this is not known – but the floods of 2017 are a possibility.

Stoats – the 11 caught have been from Lines B, D, F and G. Stoat to weasel ratio has been quite high in the former 3 lines, but only 1 stoat was caught in Line G. Miss-identification between stoats and weasels doesn't seem to be an issue.

Weasels - these are commonly caught in all lines apart from D. They have also been particularly abundant along the river recently.

Rats – large numbers of rats have been caught on all lines apart from B. Rats have been more abundant than usual along the river, no reason for this is known.

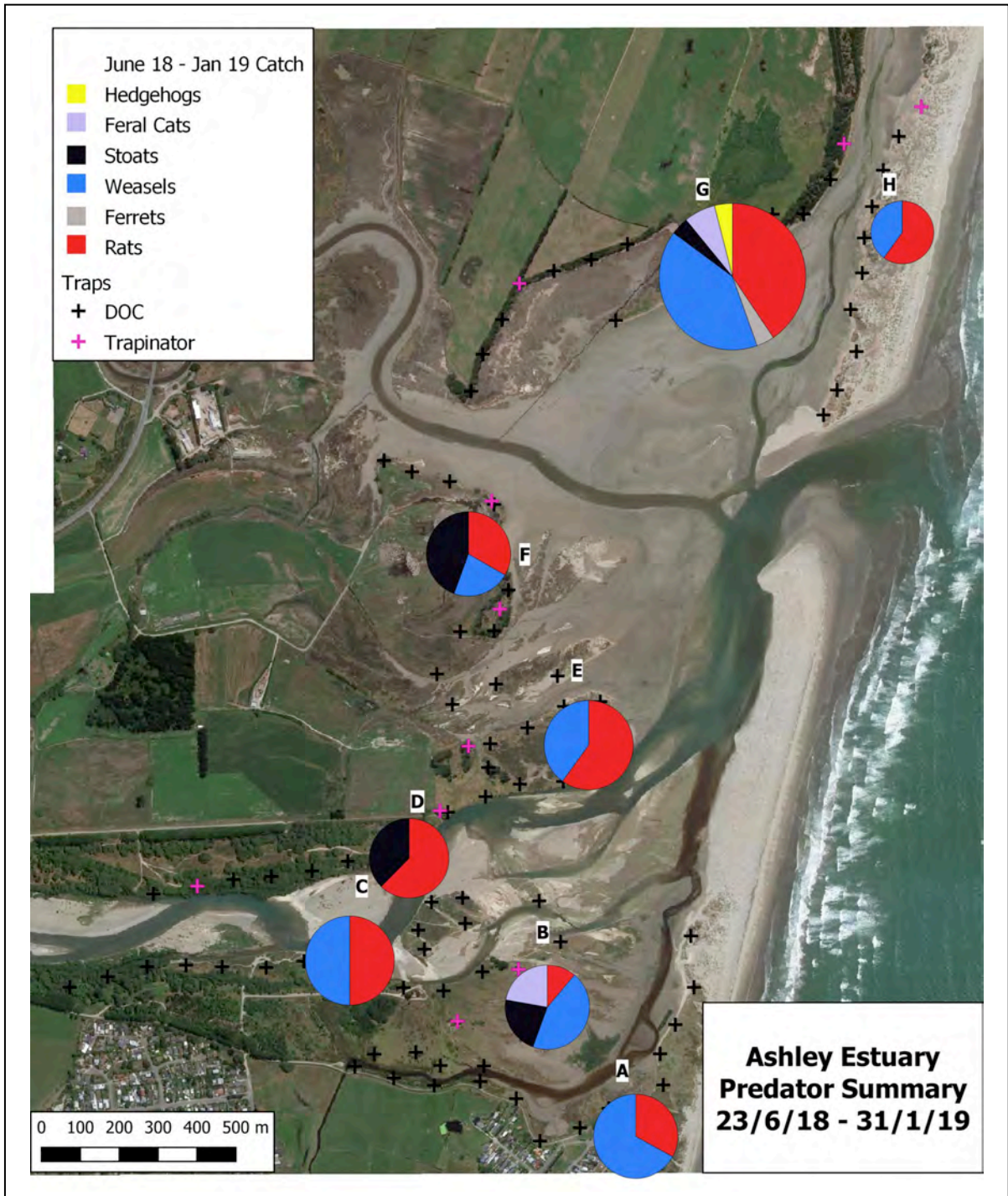


Figure 5. Catch per line

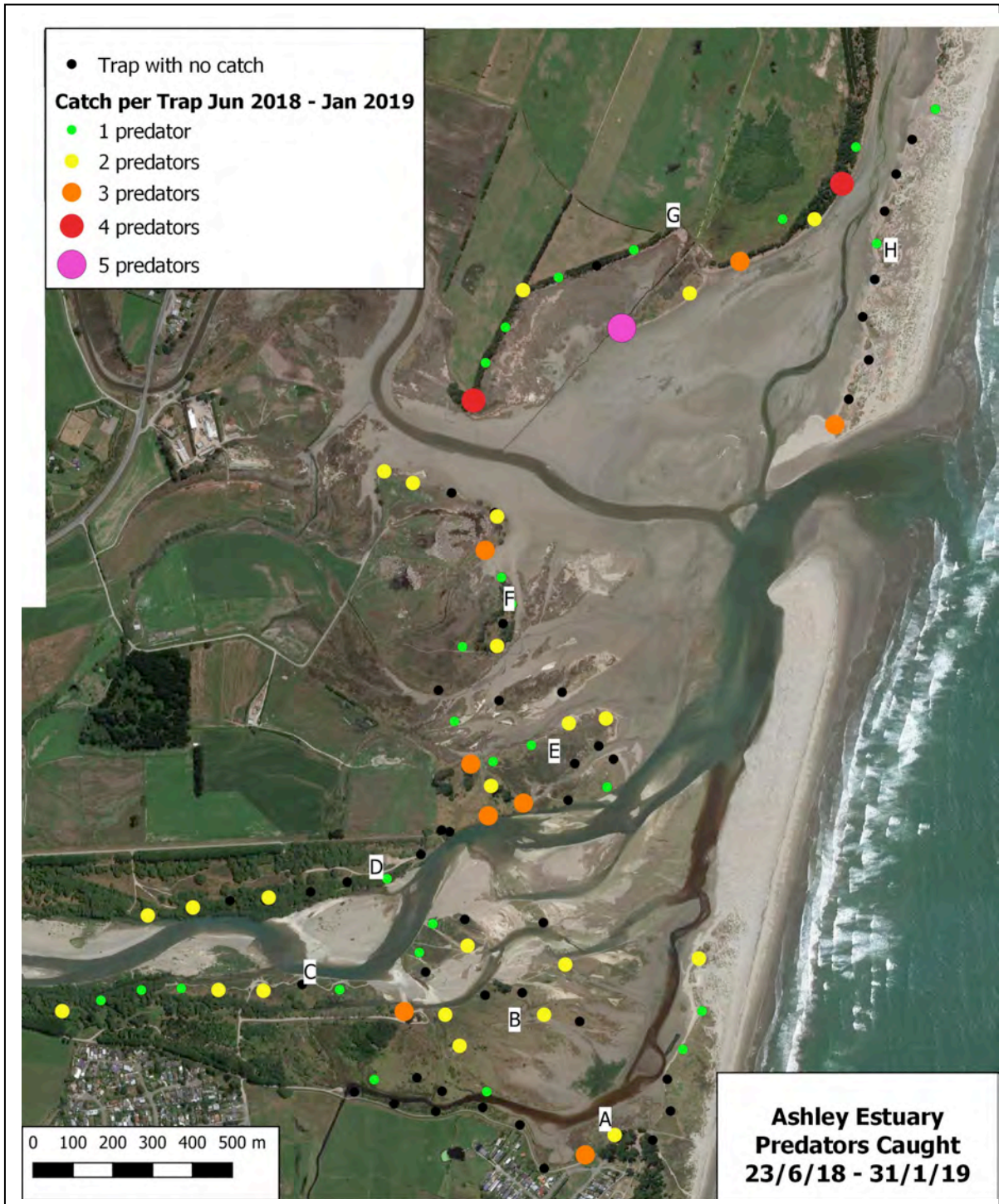


Figure 6. Catch per trap

7. The Conclusions

This trapping programme has to date been a success. All volunteers have all been regularly checking traps and recording and reporting the catch. Catch rate, at 0.37, is quite comparable with recent results from traps checked by the ARRГ further up the river. However, this rate is low compared to what was caught in the early days of ARRГ trapping – in 2005 – 2006 catch per hundred trap nights was almost 2.

8. The Recommendations

- All traps, especially those that have not caught a predator, should be checked and maintained to ensure that they are working properly.
- Consideration should be given to using trail cameras – which can help determine if we are catching all the predators in the area. Lines F and G might be the best places to try this as there are suitable places to install a camera and few people.
- After the programme has been running for a year, consideration should be given to moving any traps that have not caught anything. For example, some of the traps in Line B which are in marshy and grassy locations could possibly be moved back to the trees.
- After a year a fuller analysis can be made on what lines and trap locations are most effective, more traps could be justified on some lines, some traps could be moved to better locations.
- Some thought needs to be given to gauging the effectiveness of our trapping, if this is even possible. One way would be to use the count of wading birds made by the Ornithological Society of New Zealand every November and available from here - <https://www.osnz.org.nz/regnews.htm>. We could also do our own bird count during the nesting season. This could be done with two groups walking the shoreline at low tide along Lines A to C and D to H. In future ARRГ will do their annual bird count as far down as the estuary.

Grant Davey, 16/2/19