



Tasman Valley Predator Control 2005 - present





Kill traps






Leghold traps









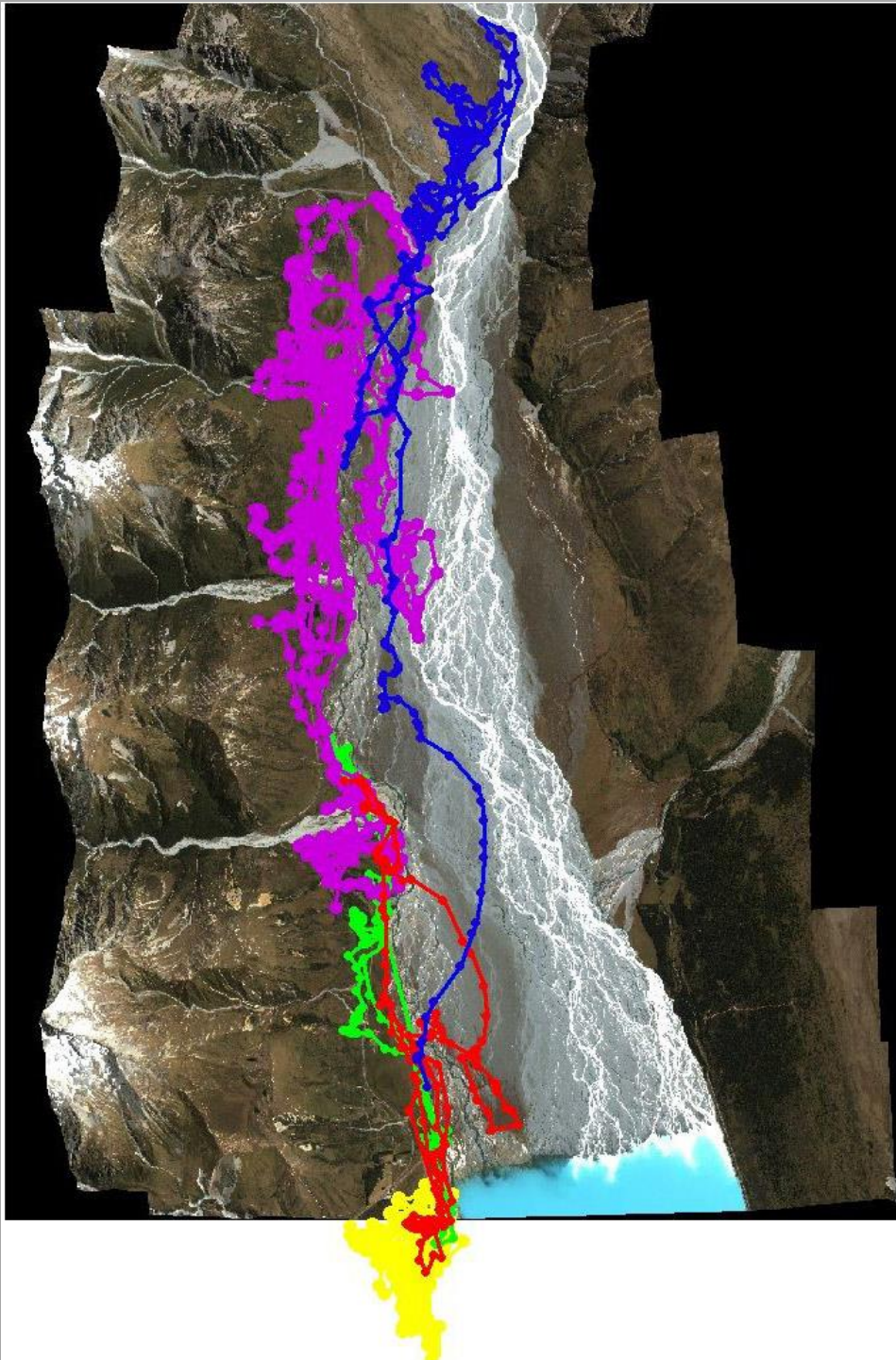
7-10-96 24H
3:15:34







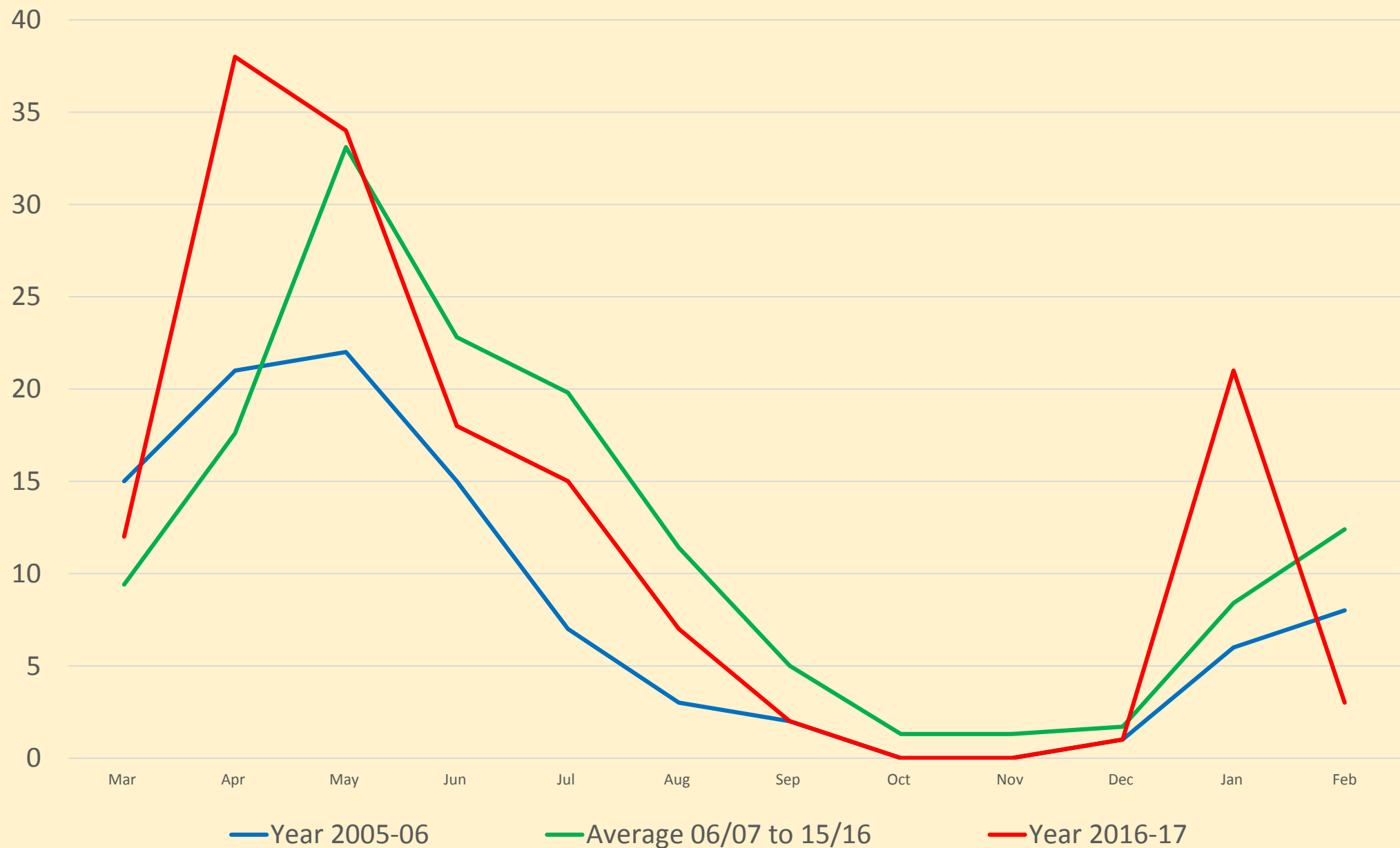


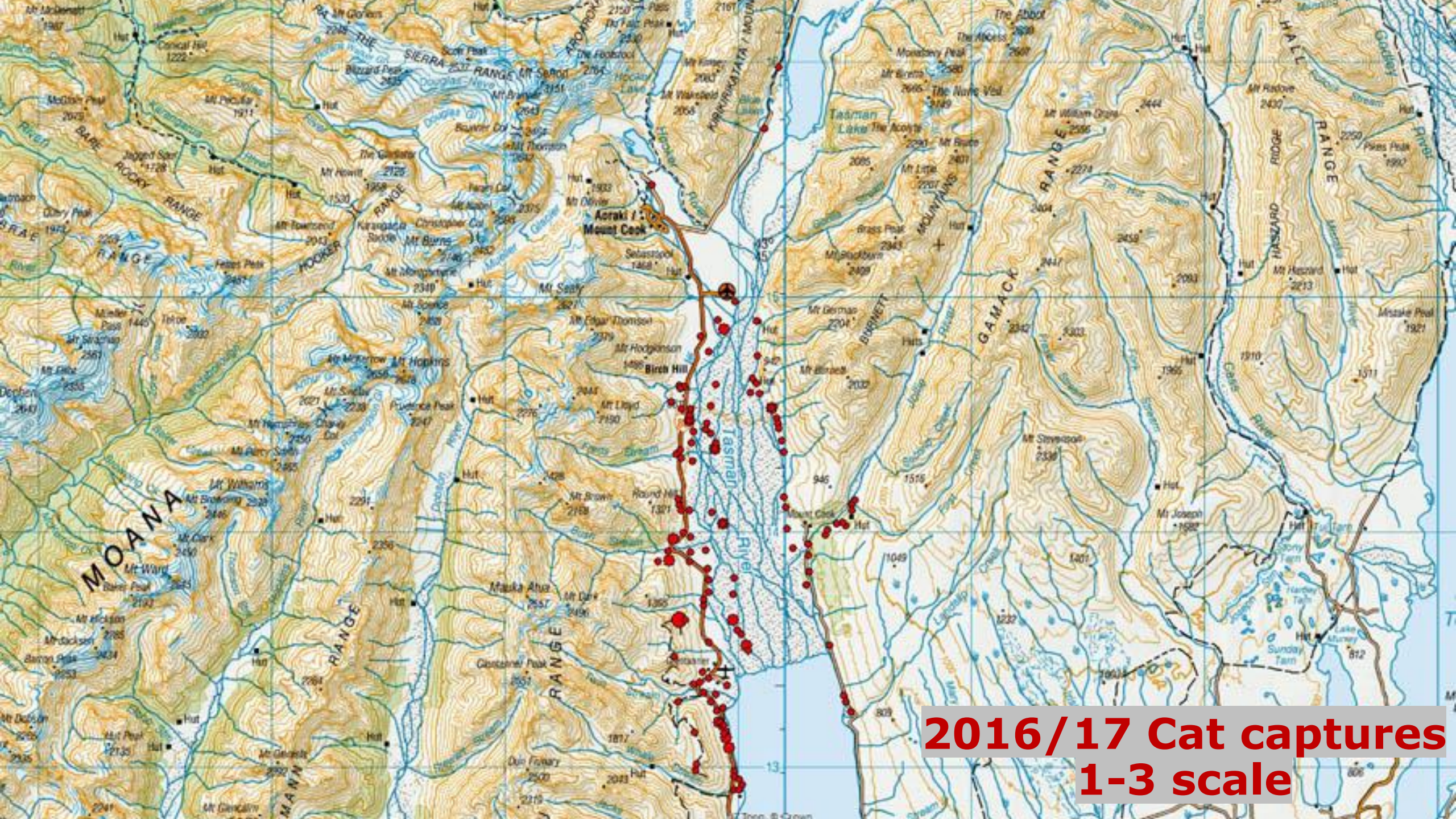






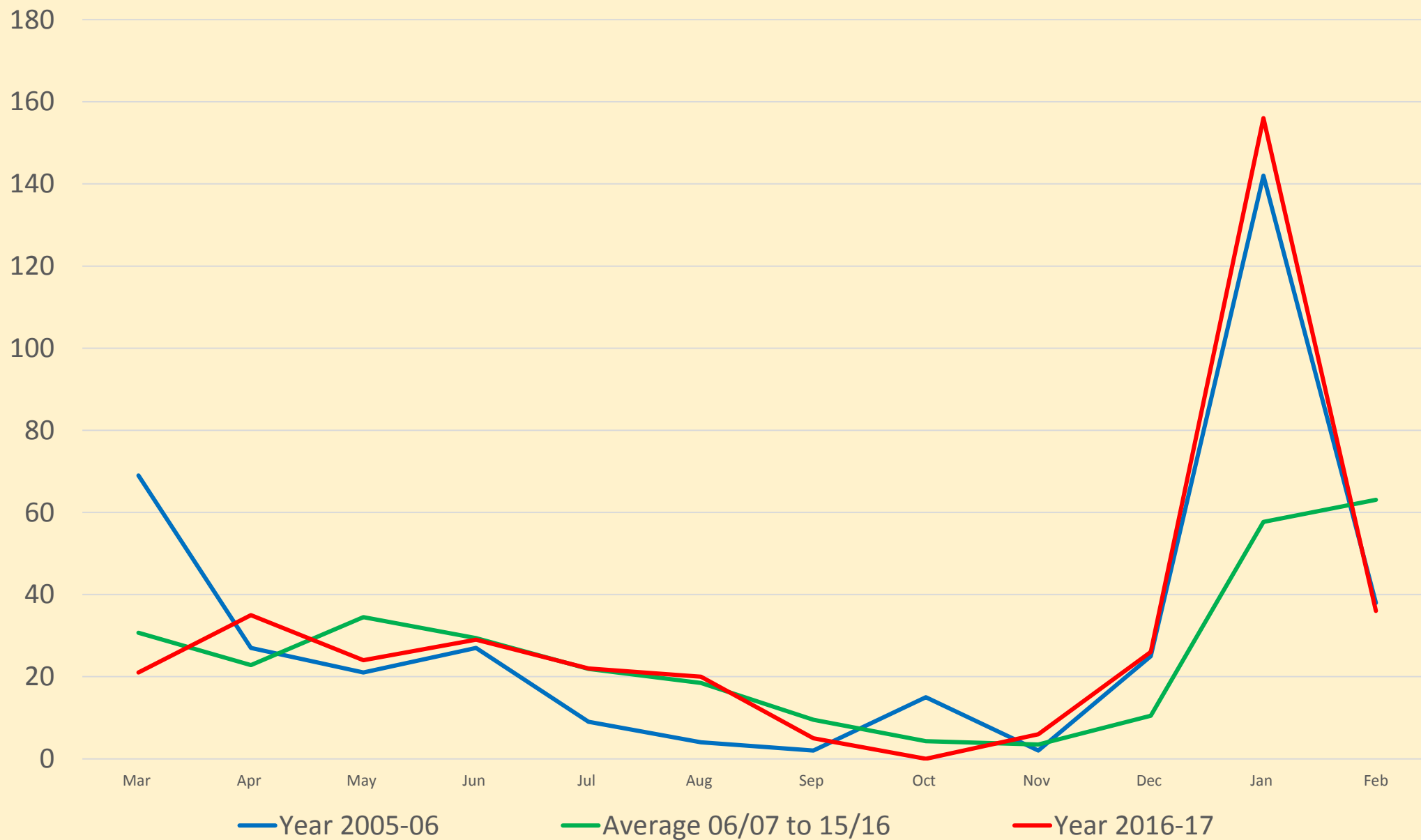
Cat captures

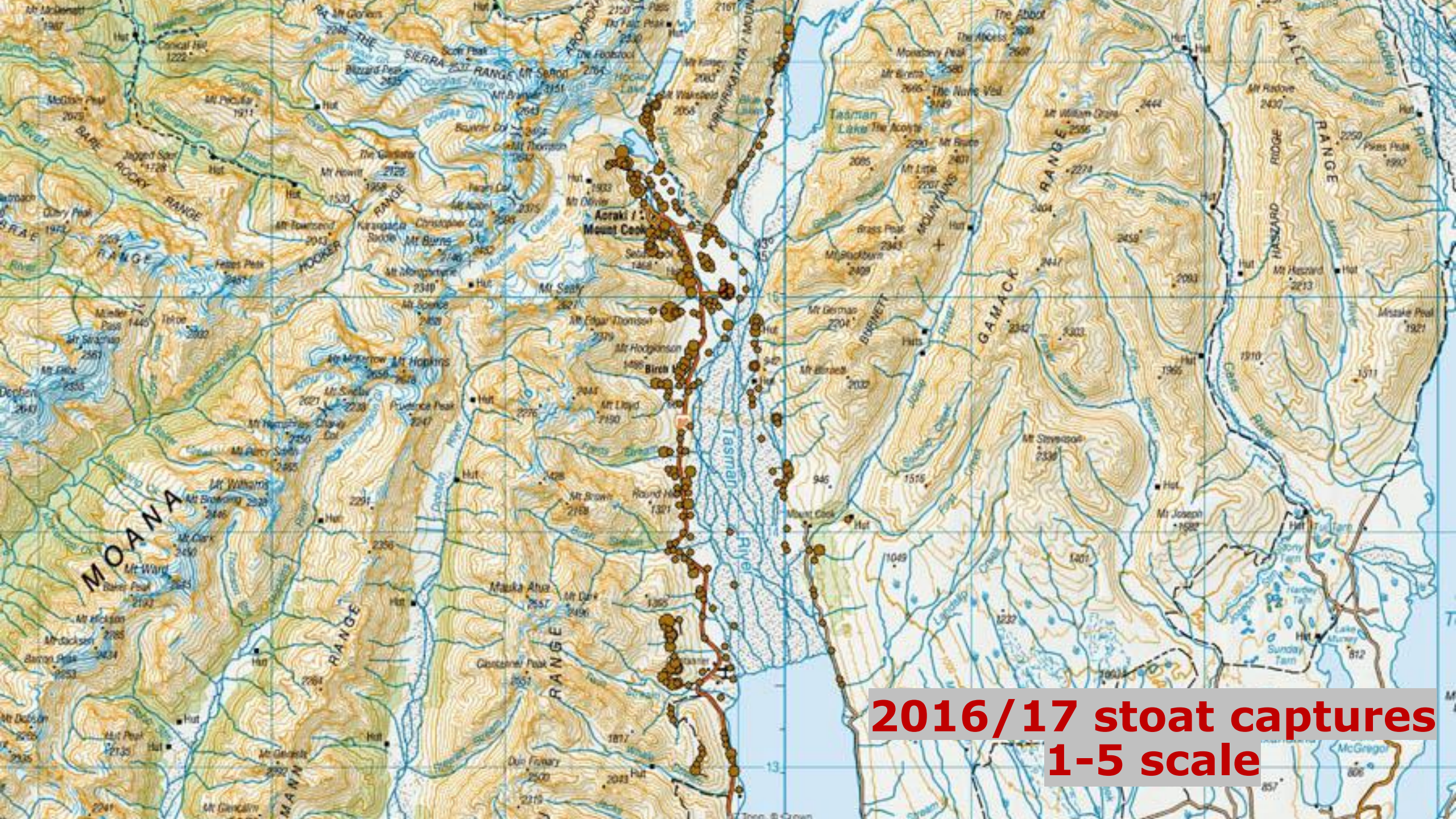




**2016/17 Cat captures
1-3 scale**

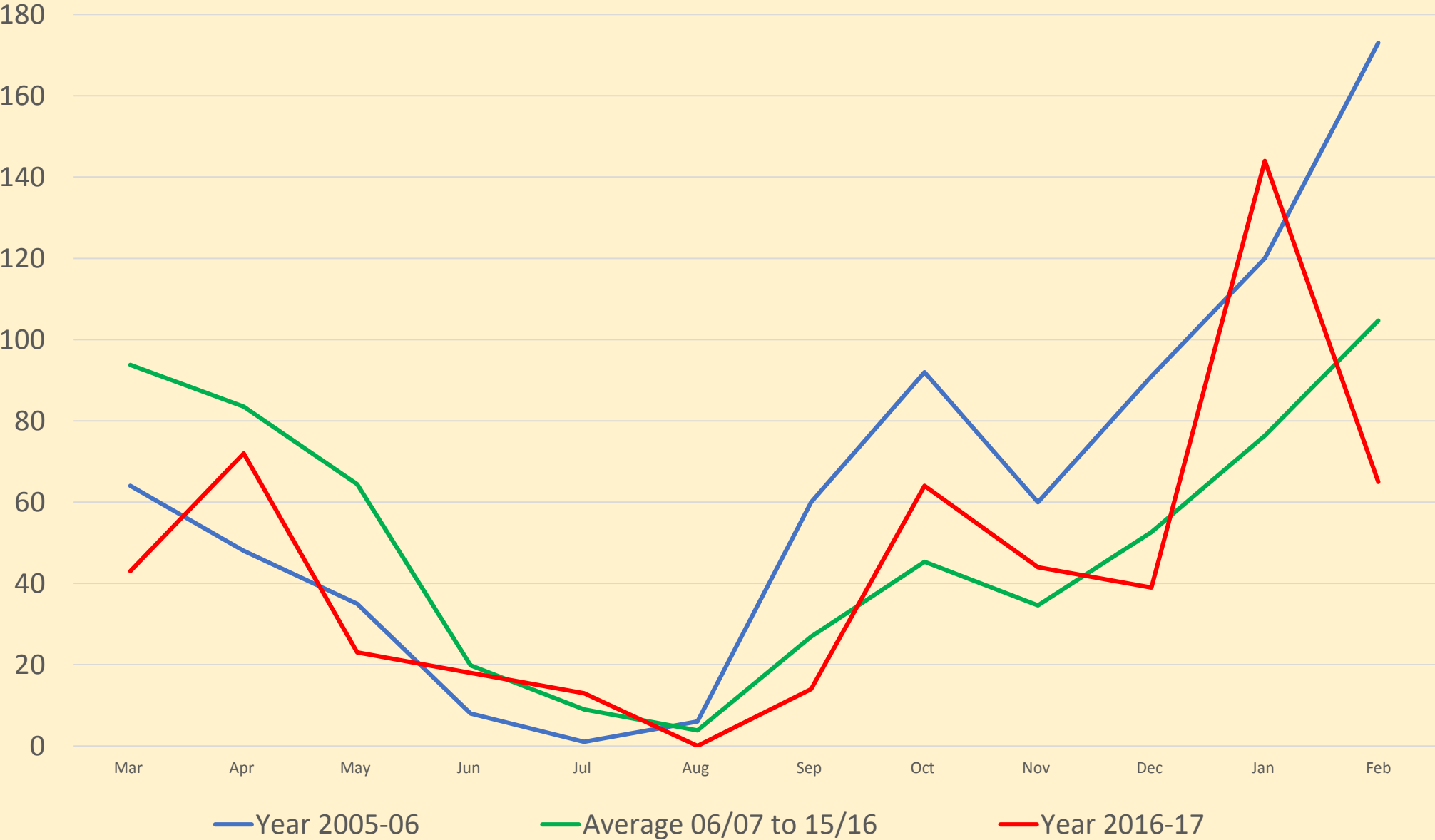
Stoat captures

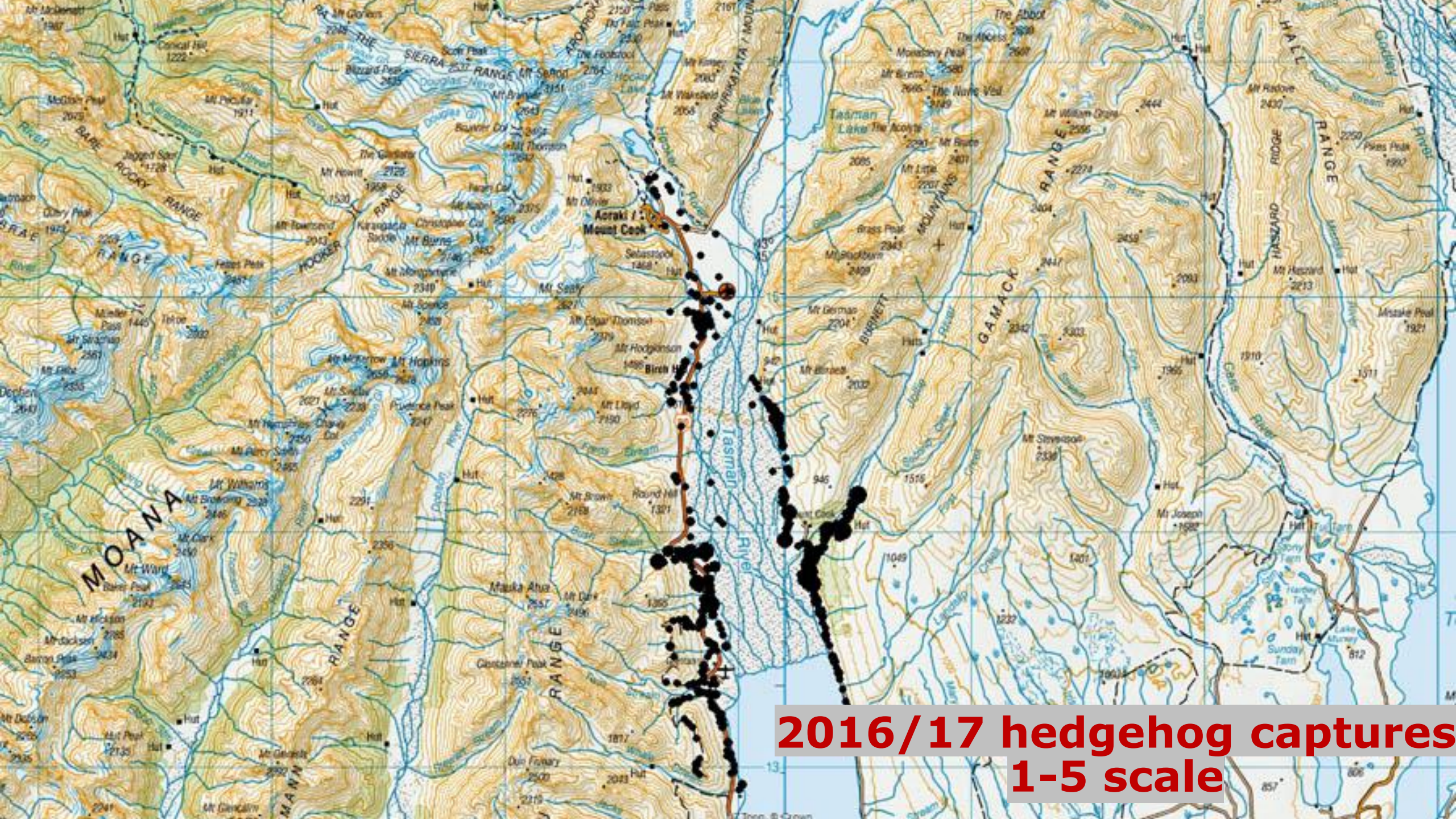




**2016/17 stoat captures
1-5 scale**

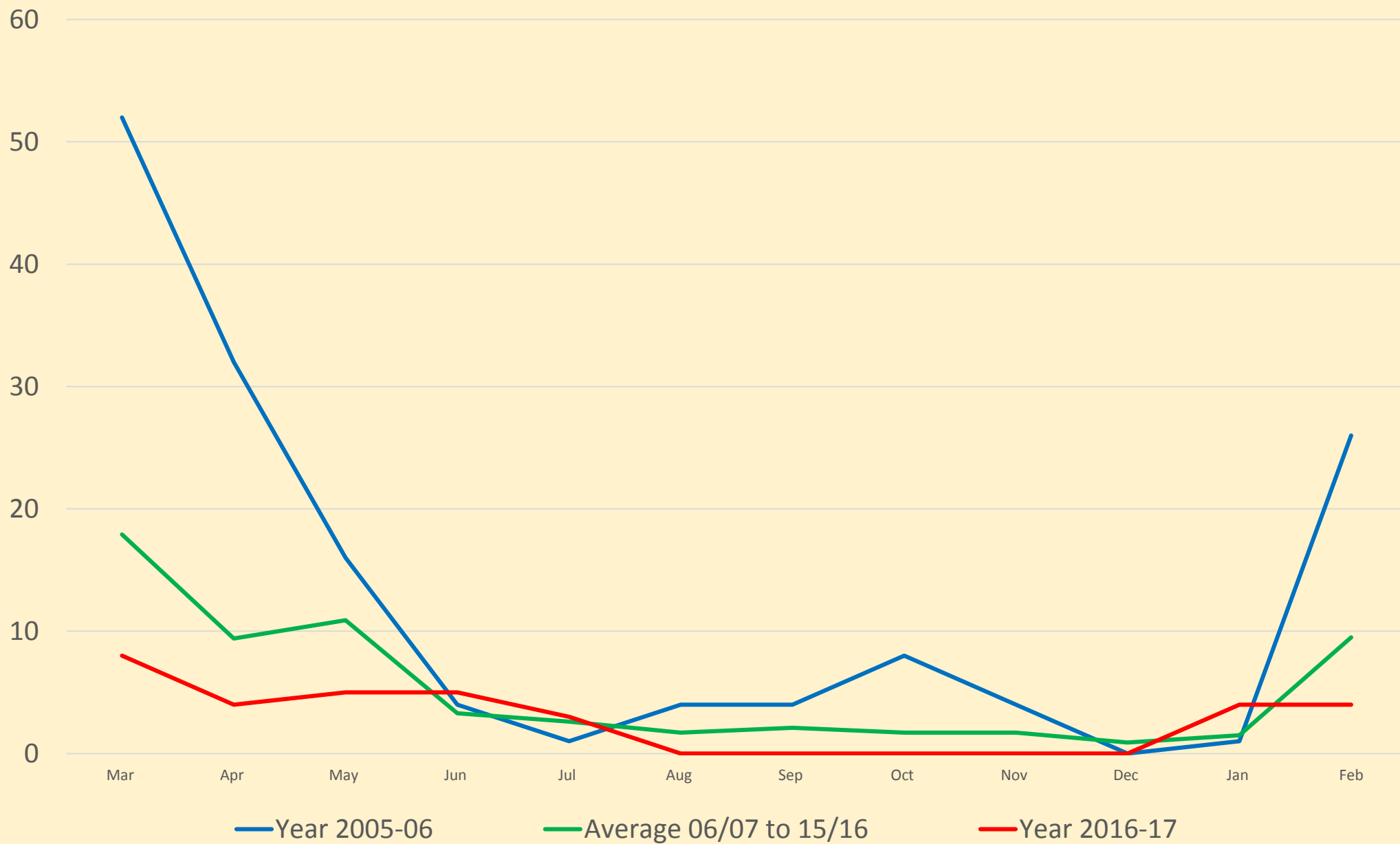
Hedgehog captures

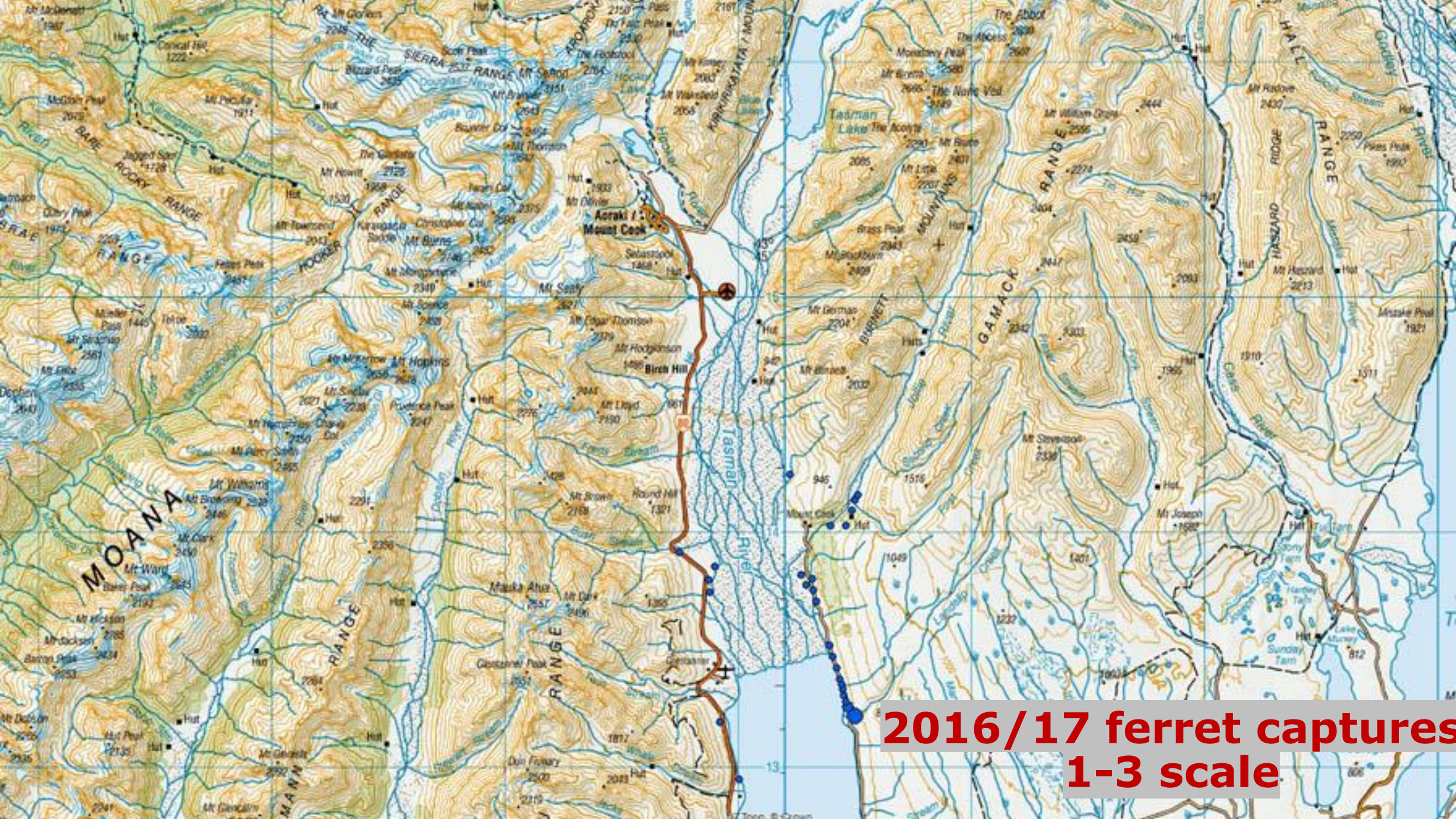




**2016/17 hedgehog captures
1-5 scale**

Ferret captures





**2016/17 ferret captures
1-3 scale**

Monthly totals 2016/17 and totals since 2005

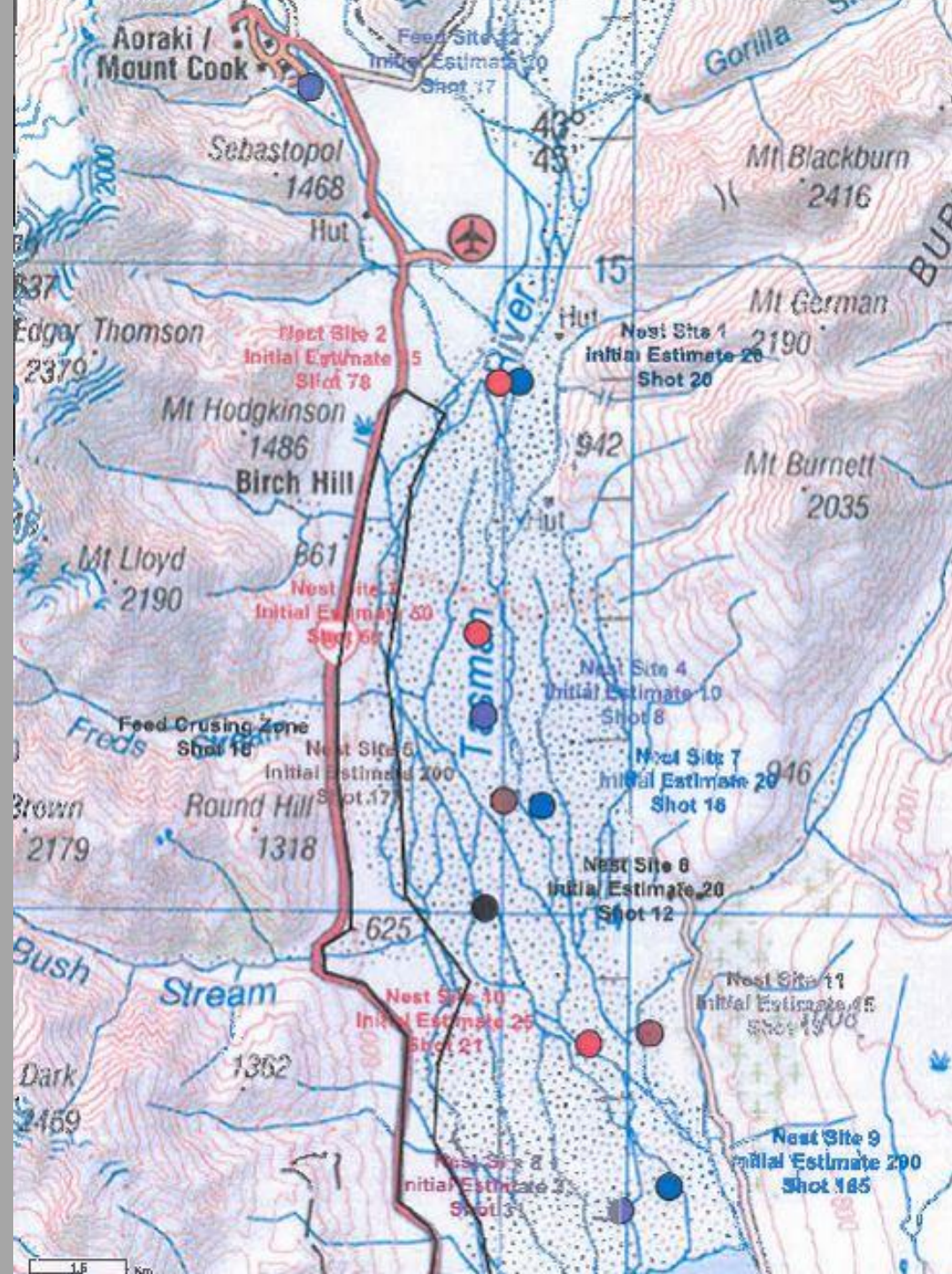
TARGET SPECIES	Mar-16 ²	Apr-16 ²	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17 ²	Feb-17 ²	Total	Total since March 05	Total Including legholds
Cat	12	38	34	18	15	7	2	0	0	1	21	3	151	1693	2463
Ferret	8	4	5	5	3	0	0	0	0	0	4	4	33	817	829
Hedgehog	43	72	23	18	13	0	14	64	44	39	144	65	539	7445	8782
Norway rat	2	2	0	2	1	0	0	0	0	0	0	0	7	44	45
Possum	0	0	0	0	2	0	3	2	5	1	0	0	13	484	653
Stoat	21	35	24	29	22	20	5	0	6	26	156	36	380	3825	4048
Weasel	0	3	1	0	0	0	1	3	0	2	21	1	32	209	216
Total	86	154	87	72	56	27	25	69	56	69	346	109	1156	14549	17036

Analysis and changes

- **After five years of control - Species specific responses by ground-nesting Charadriiformes to invasive predators and river flows in the Braided Tasman River of NZ. Jennyffer Cruz et al.**
- **Results were fairly ambivalent but highlighted the complexities of evaluating the benefits of predator management on multiple prey species in the same ecosystem.**
- **In 2013 following trail camera use on BFT nests, black-backed gull control was started.**
- **In 2015, leg-hold trapping was changed to a valley-wide regime for two 10 day sessions in May and August**
- **In 2016, this was changed to one valley-wide 10 day session in April-May**





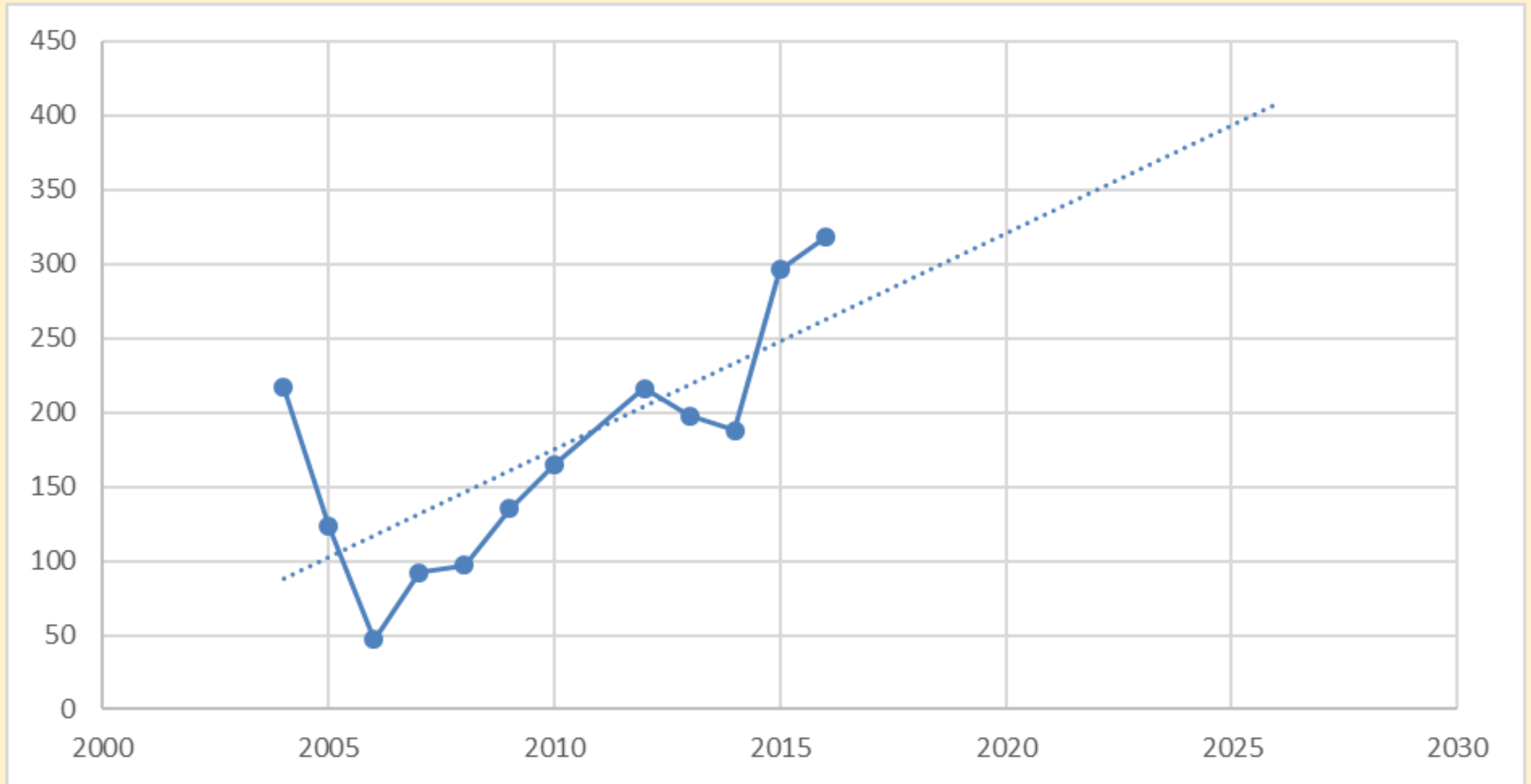




Black-backed gull control

Year	Technique	Field Hours – staff/ contractors	Approx cost	# of adults, chicks and eggs
2013	Alphachloralose	486 (staff)	\$15,100	352 adults 49 chicks
2014	Ground shooting around nesting areas	65 (contractor)	\$3600	636 adults 50 chicks 112 eggs
2015	Ground shooting mainly over bait dumps	75 (staff and contractor)	\$3100	147 adults 23 chicks 20 eggs
2016	Ground shooting mainly over bait dumps	60	\$2500	152 adults 7 chicks
2016	Aerial shooting from Cabri G2 Helicopter (4.5 hrs @ \$750/hour)	41	\$5875	250 adults

Index counts of BFTs on the Tasman River. Predator control began in 2005



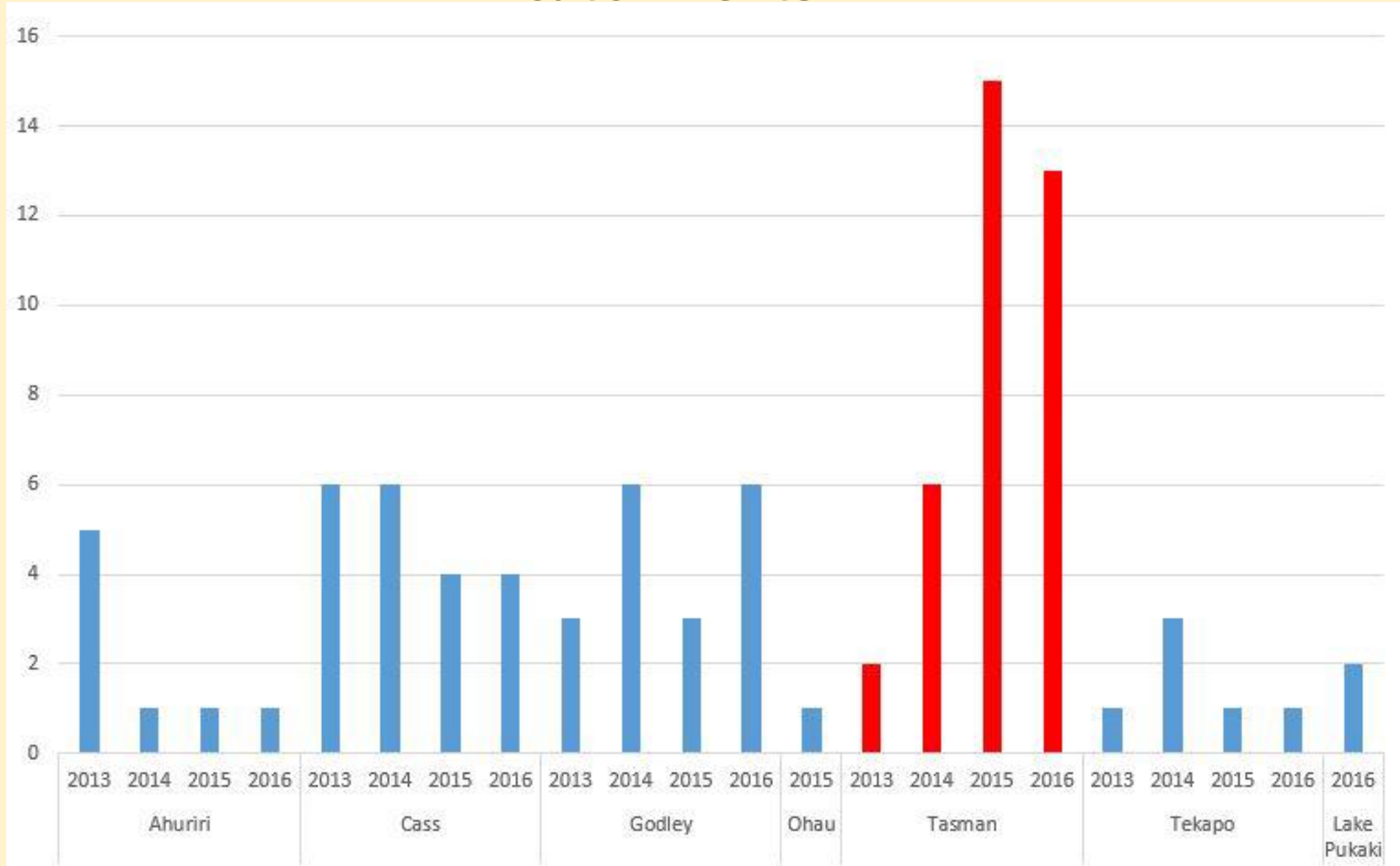
Wrybill nesting success

Wrybill	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2012-13	2013-14	2014-15	2015-16	2016-17
Total no. of ♀'s that attempted to breed* (H)	16	9	19	26	28	26	33	38	32	34	51
No. of nests - hatched \geq 1 egg	16	10	17	22	24	19	21	26	23	22	37
No. of nests - fledged \geq 1 chick	4	7	10	9	5	9	3	17	17	14	14
No. of nests - lost all chicks	8	1	1	6	14	9	5	9	6	5	13
No. of nests - unknown fledging outcome	4	2	6	7	9	1	13	0	0	3	10
No. of chicks fledged as min-max (I)	4	10-12	10-17	14-19	6-16	13-17	4-23	18	25	20-25	20-35
<i>Fledging success as min-max (J) = I/E</i>	0.14	0.56-0.67	0.31-0.53	0.33-0.45	0.15-0.39	0.35-0.46	0.11-0.66	0.43	0.69	0.54-0.68	0.37-0.65
<i>Breeding success as min-max (F x G x J)</i>	0.13	0.53-0.64	0.27-0.47	0.25-0.35	0.12-0.33	0.24-0.32	0.06-0.38	0.28	0.5	0.34-0.43	0.25-0.43
Hatching success per female (E/H)	1.81	2	1.68	1.62	1.46	1.4	1.1	1.1	1.2	1.1	1.06
Fledging success per female as min-max (I/H)	0.25	1.11-1.33	0.53-0.89	0.54-0.73	0.21-0.57	0.5-0.65	0.003-0.2	0.47	0.78	0.59-0.74	0.39-0.63

Back-fronted tern nesting success

Black-fronted tern	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2012-13	2013-14	2014-15	2015-16	2016-17
Total no. of ♀'s that attempted to breed* (O)	23	52	76	28	30	26	201	51	37	65	77
No. of nests - hatched \geq 1 egg	1	37	18	11	9	15	36	40	29	56	70
No. of nests - fledged \geq 1 chick (P)	0	10	0	4	3	0	6-12	-	-	-	-
No. of nests - lost all chicks	0	23	18	7	6	12	-	-	-	-	1
No. of nests - unknown fledging outcome	1	4	0	0	0	3	-	0	-	-	-
No. of chicks fledged (Q)	-	19	-	5	4	-	12-14	32	32	30-66	40-107
<i>Fledging success (R) = Q/E</i>	-	0.27	-	0.23	0.25	-	0.20-0.24	0.46	0.56	0.29-0.65	0.35-0.93
<i>Breeding success (F x G x R)</i>	-	0.19	-	0.08	0.07	-	0.04	0.35	0.44	0.23-0.53	0.31-0.82
Hatching success per female (E/O)	0.09	1.35	0.47	0.79	0.53	1.15	0.29	1.35	1.54	1.57	1.49
Fledging success per female (Q/O)	-	0.36	-	0.18	0.13	-	0.06-0.07	0.63	0.86	0.46-1.02	0.52-1.39

Numbers of kaki pairs nesting in each of the main river catchments



Kaki Recruitment rates

- **In the Tasman over the last few years, recruitment to breeding age has risen to 49% from 22% previously**
- **Overall kaki recruitment is 29%**



The future

- **Continued BBG control including other big colonies in other catchments**
- **Extending predator control into other main catchments to the north east**
- **Maintain good outcome monitoring on key species**





Acknowledgements

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- Trappers over the years including Eigill Wahlberg, Simon Stevenson, Tom Barr, Shaun Aitcheson, Glen Currall, Carol Burke and Glenn MacDonald.
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- Heaps of staff involved with outcome monitoring but in particular Antje Leseberg, Simone Cleland and Phil Guilford.
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