

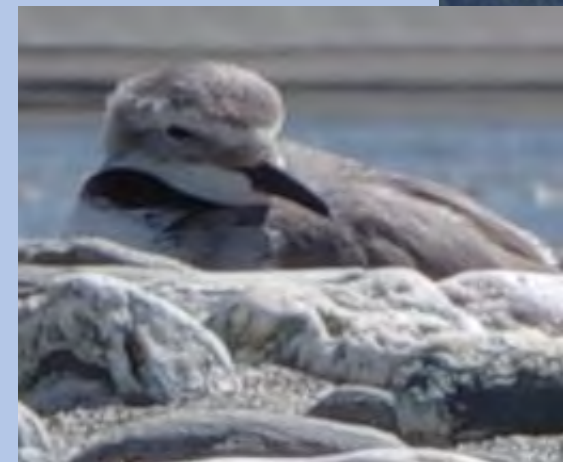
## Ridge to River

Endemic braided river  
birds cryptic defense  
has limited or no effect  
against introduced  
mammalian predators

Wilkin stoat since 1885  
(King 1984)

# Makarora Braided River Bird Monitoring and Protection Adventure and the Challenges of Nature

Rachel L Hufton  
Anthony Coote





# Aspiring Biodiversity Trust

Main Divide to Braided River

Makarora Weather Window  
2m rain/year

Mt Cook

Mt Aspiring

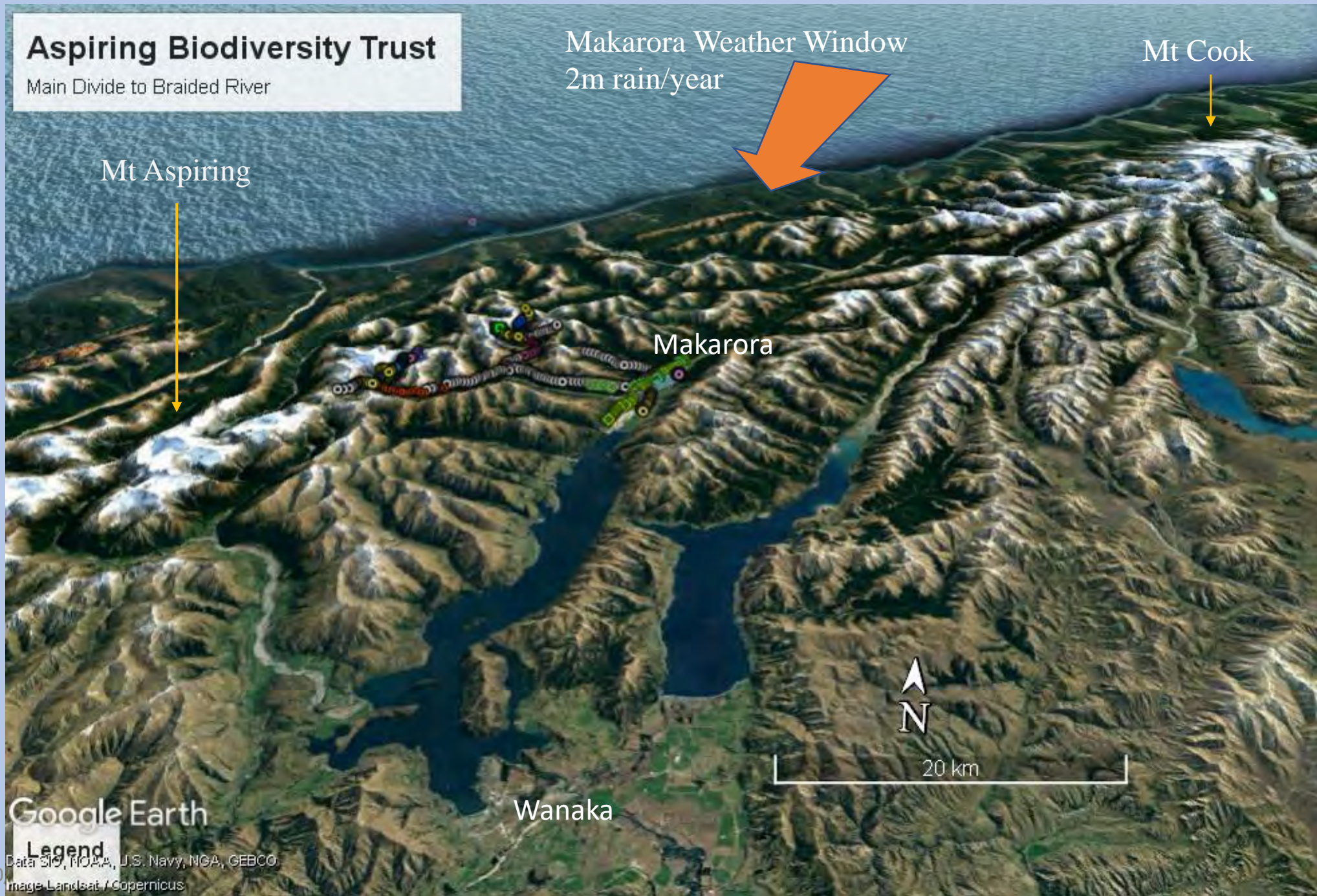
Makarora

Wanaka

Google Earth

Legend

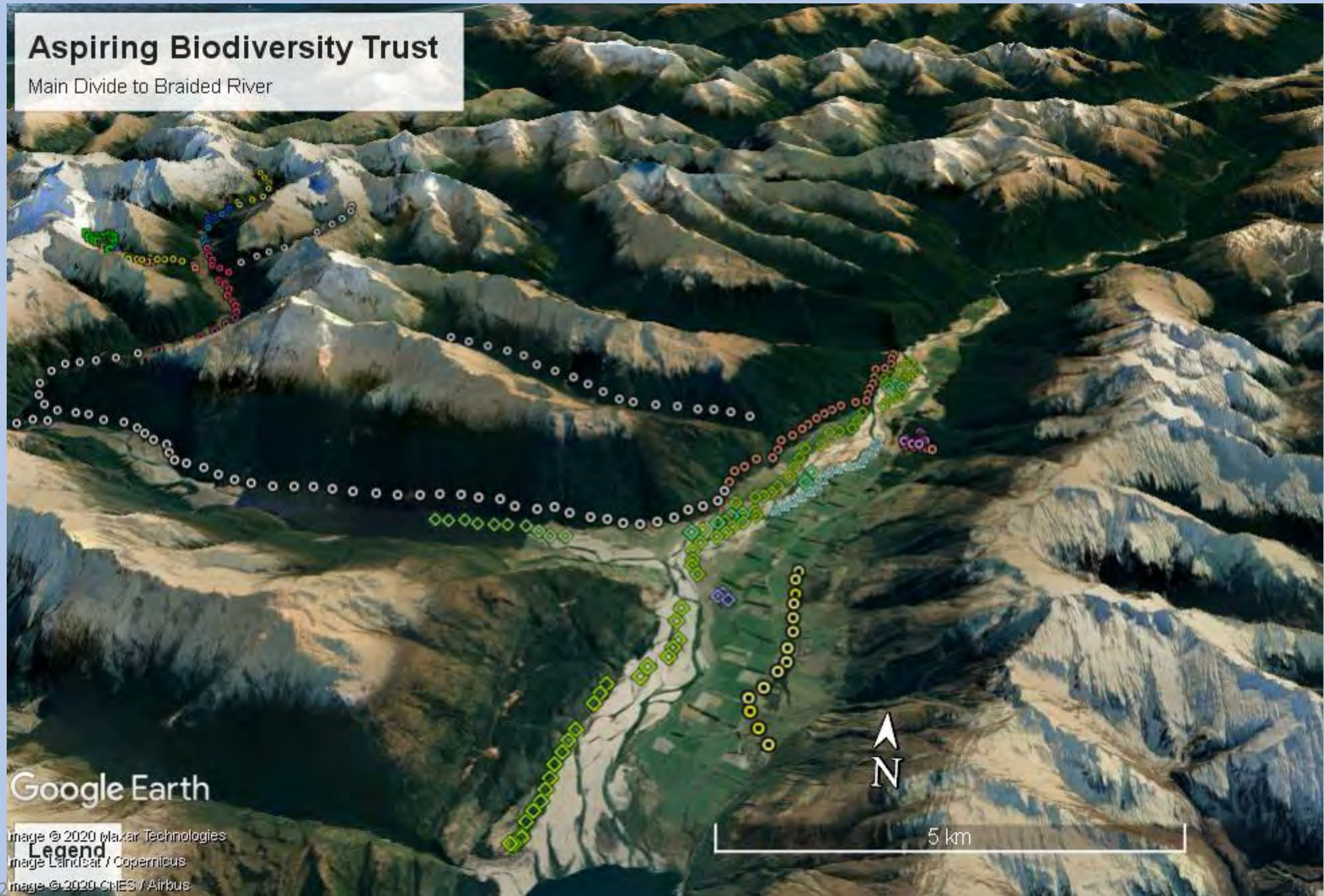
Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image Landsat / Copernicus





# Aspiring Biodiversity Trust

Main Divide to Braided River





## Aspiring Biodiversity Trust

was Established in 2017 to help protect and restore Makarora catchment threatened species and their habitats “from ridge to river”.

Three main delivery elements;

- Ascertain current population status of indigenous biodiversity informing conservation management,
- Predator control/ threat management,
- Biodiversity education, awareness raising.

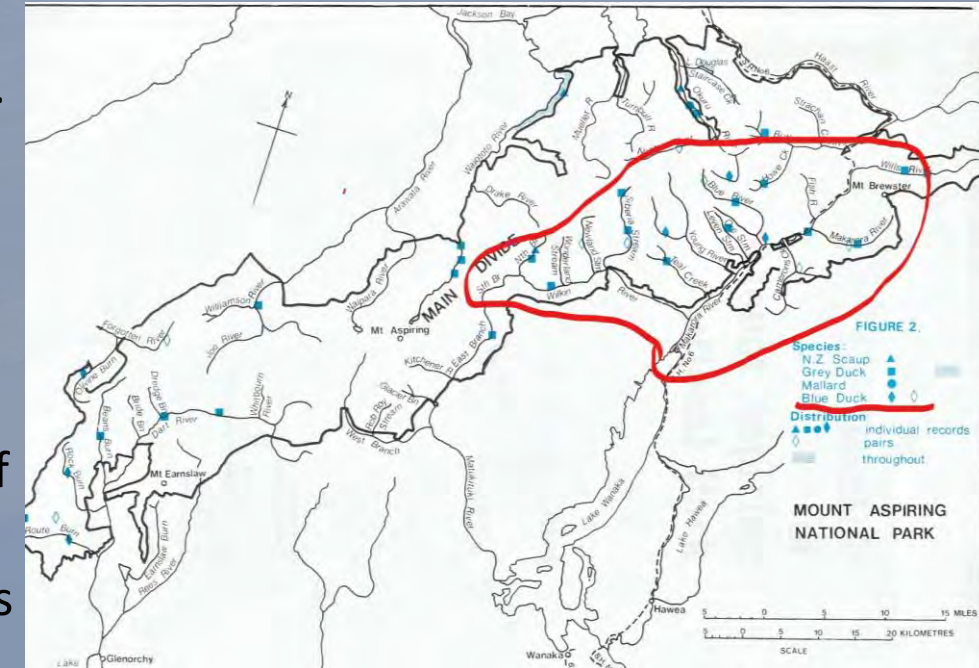


## Legacy Data

Historical records include; whio/blue duck (Child 1975) and kaki/ black stilt (prior). Kaki no more, whio retreated to upper river/alpine habitats.

DOC previously monitored a section of river every 3-5y from 1966 up to 2012, ABT's extended walkover survey undertaken from 2017.

Periodic 1080 application:  
Feb 2017 & Oct 2019



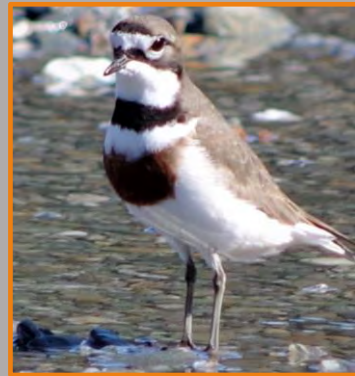
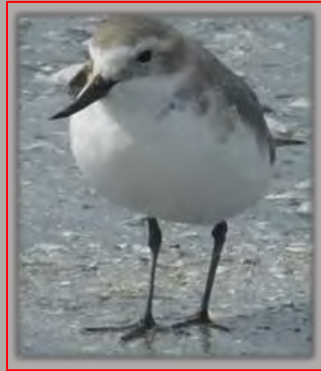
Child P (1981). Birdlife of Mount Aspiring National Park



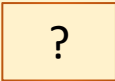


# Threat Classification in New Zealand

## Summer migrants

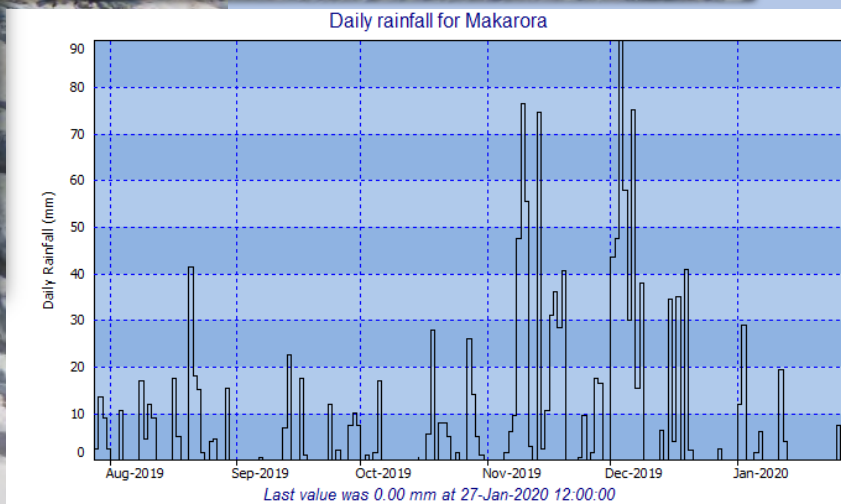


## Resident

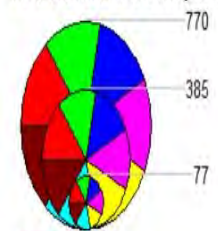




Accumulative Threats – Mammalian/Avian predation, Anthropogenic disturbance, Climate/Weather

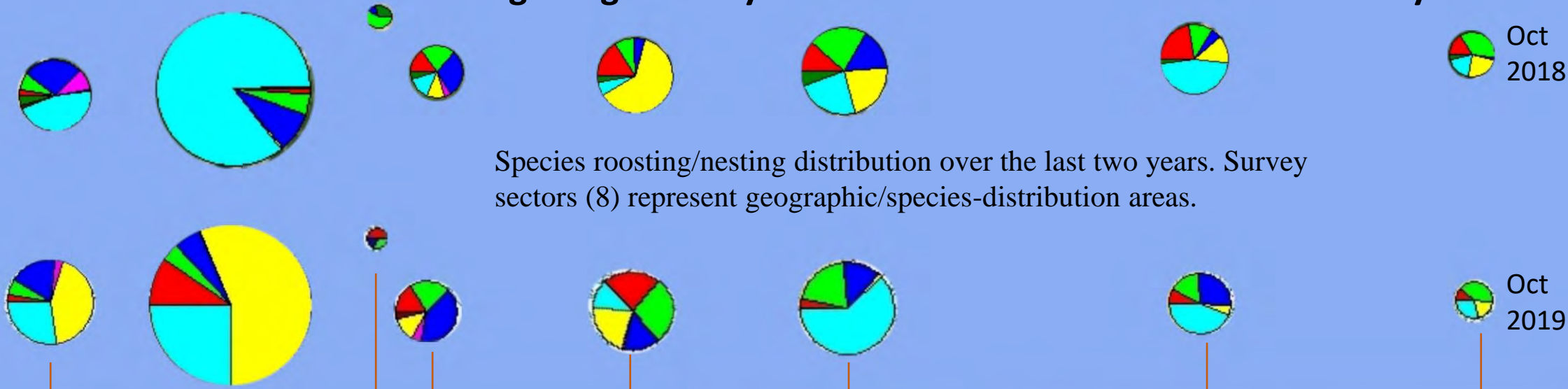






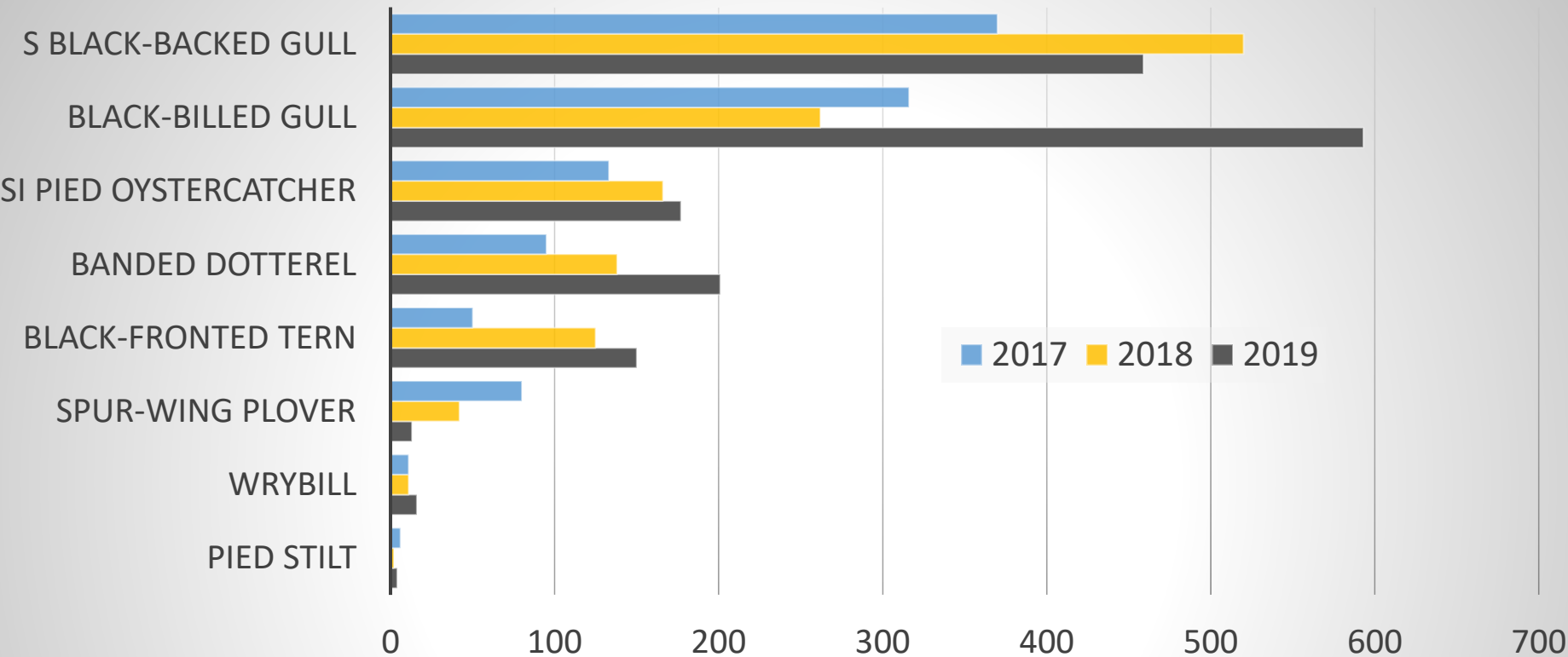
- BF\_Tern
- Sipo
- Dotterel
- Wrybill
- Blackbill
- SBBG
- Pied\_Stilt

## ABT Predator Control Program guided by annual 17.5 Km braided river bird survey





ABT Makarora Braided River Annual Bird Counts ( Oct 2017- Oct 2019)



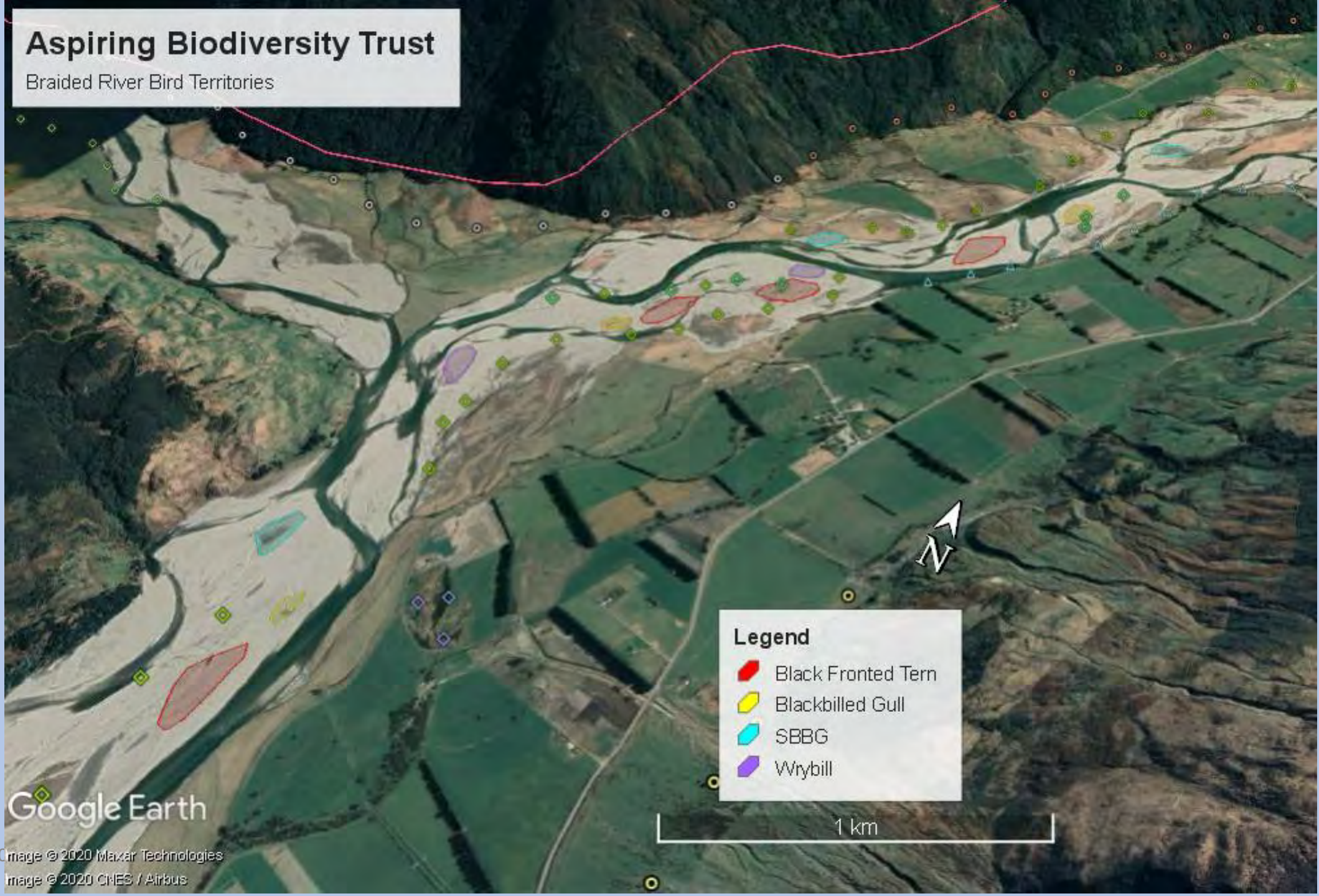
	Pied stilt	Wrybill	Spur-wing plover	Black-fronted tern	Banded dotterel	SI pied oystercatcher	Black-billed gull	S black-backed gull
2017	6	11	80	50	95	133	316	370
2018	2	11	42	125	138	166	262	520
2019	4	16	13	150	201	177	593	459

**Note:** Black-billed gulls (during 2018) were late returning to breed with nesting colony of 200 noted at the lower Wilkin mid-late November.



# Aspiring Biodiversity Trust

Braided River Bird Territories



Google Earth

Image © 2020 Maxar Technologies

Image © 2020 CNES / Airbus



# 2019-2020 ABT Nest monitoring

Species	Date (2019/2020)	Location	Nests	Eggs per Nest	Hatch date	Fledge date	Date lost
Black-fronted tern	7 October	Upper river	5-10	2-3	-	-	11 Oct (flood)
	15 October	Lower river	25 -40	1-3	From 29 Oct	30 Nov	Additional resources required
Black-billed gull	15 Oct	Lower Wilkin confluence	259 + colony continued to grow	2-4	29 Oct – 30 Nov	Dec-Jan	Additional resources required
Wrybill	18 Oct – 10 Nov	Lower Wilkin conf	2	2	11 Nov x 1 nest	Three chicks banded Nov	6 Nov
	23 Oct	Upper Wilkin conf	1	2	26 Nov x 1 nest		4 x nest lost to flood, 1 x smallest chick lost, how?
	19 Oct - Nov	Lower river/delta	3	2	Early Nov		(second brood)



Black-fronted tern chick (19 Nov)



First Makarora wrybill banded (19 Nov)



Black-billed gull chick creche (19 Nov) growing



## Monitoring Observations – banding records



SIPO age 10+  
banded at Nelson



Male (banded as fledgling 2012)

Female wrybill (banded as adult 2012)



# Species Observations - The life of a Wrybill





Second brood  
with one egg  
much smaller





Second brood  
hatched (incubation  
<30 days)



The Interloper banded previously  
(2014, Miranda)



Photo credit: Nick Beckwith  
(volunteer)



Second chick just hatched,  
egg tooth still visible



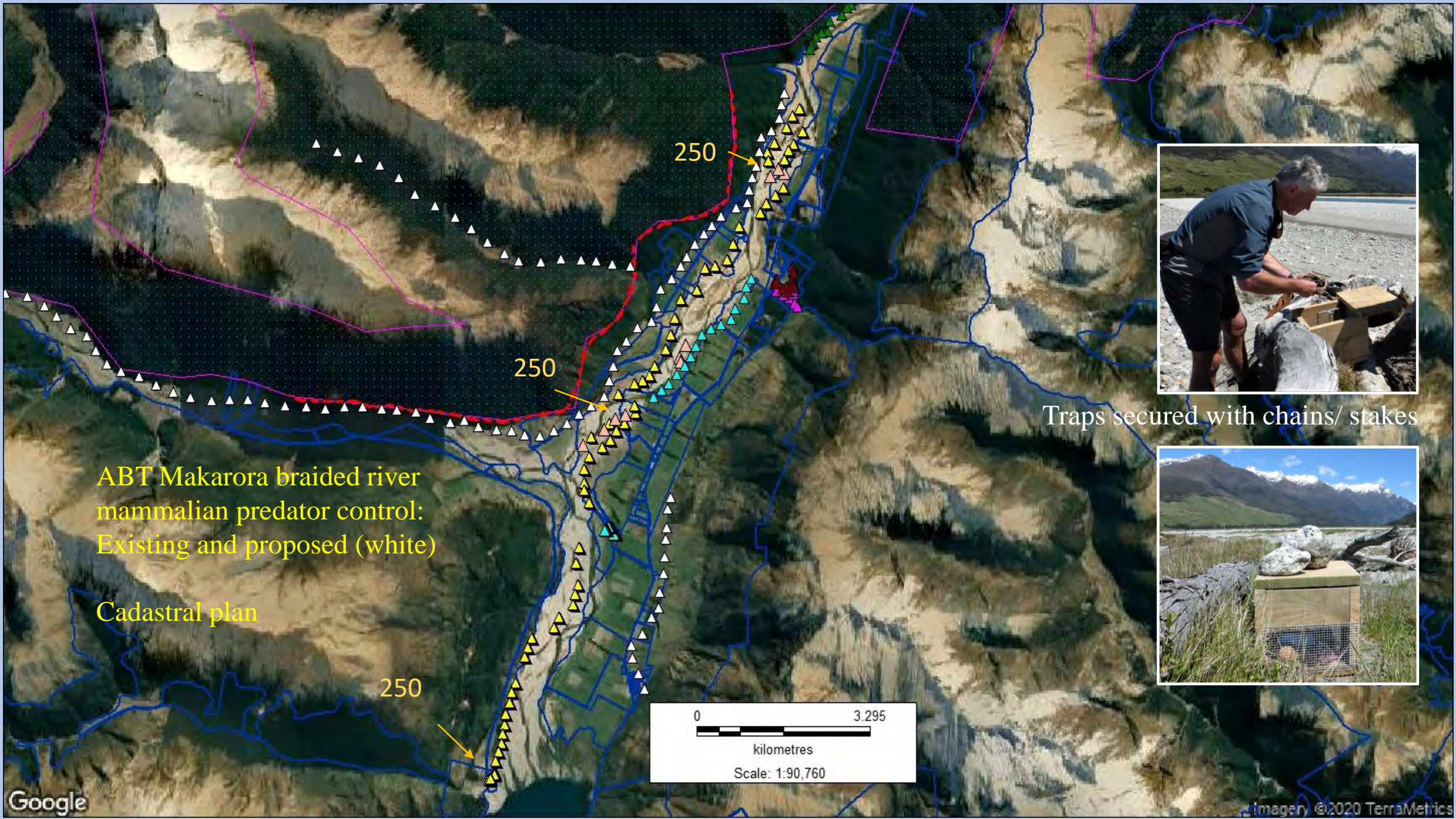
20/05/2018  
Male with  
both chicks



2019 Black-billed Gull  
Colony







ABT Makarora braided river  
mammalian predator control:  
Existing and proposed (white)

Cadastral plan

250

250

250

0 3.295

kilometres

Scale: 1:90,760



Traps secured with chains/ stakes



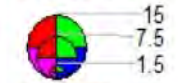


ABT Makarora braided river  
mammalian predator control:  
April 2018-June 2020

SBBG control also undertaken

Possum Pete live possum &  
feral cat control  
lower Makarora

Aspiring Biodiversity Trust  
Makarora River Predator Control



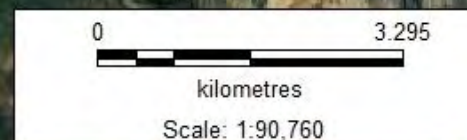
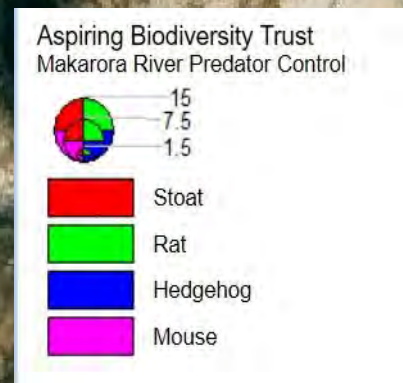
Stoat  
Rat  
Hedgehog  
Mouse

1 x ferret



ABT Makarora braided river  
mammalian predator control:  
April 2018-June 2020

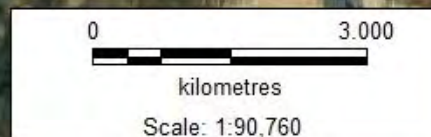
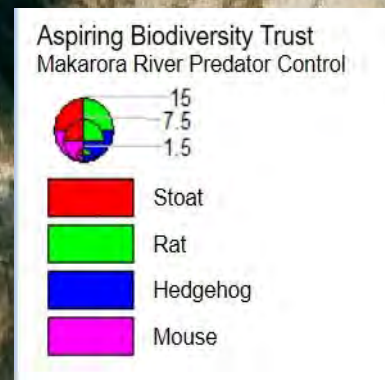
Stoat & Rat data only





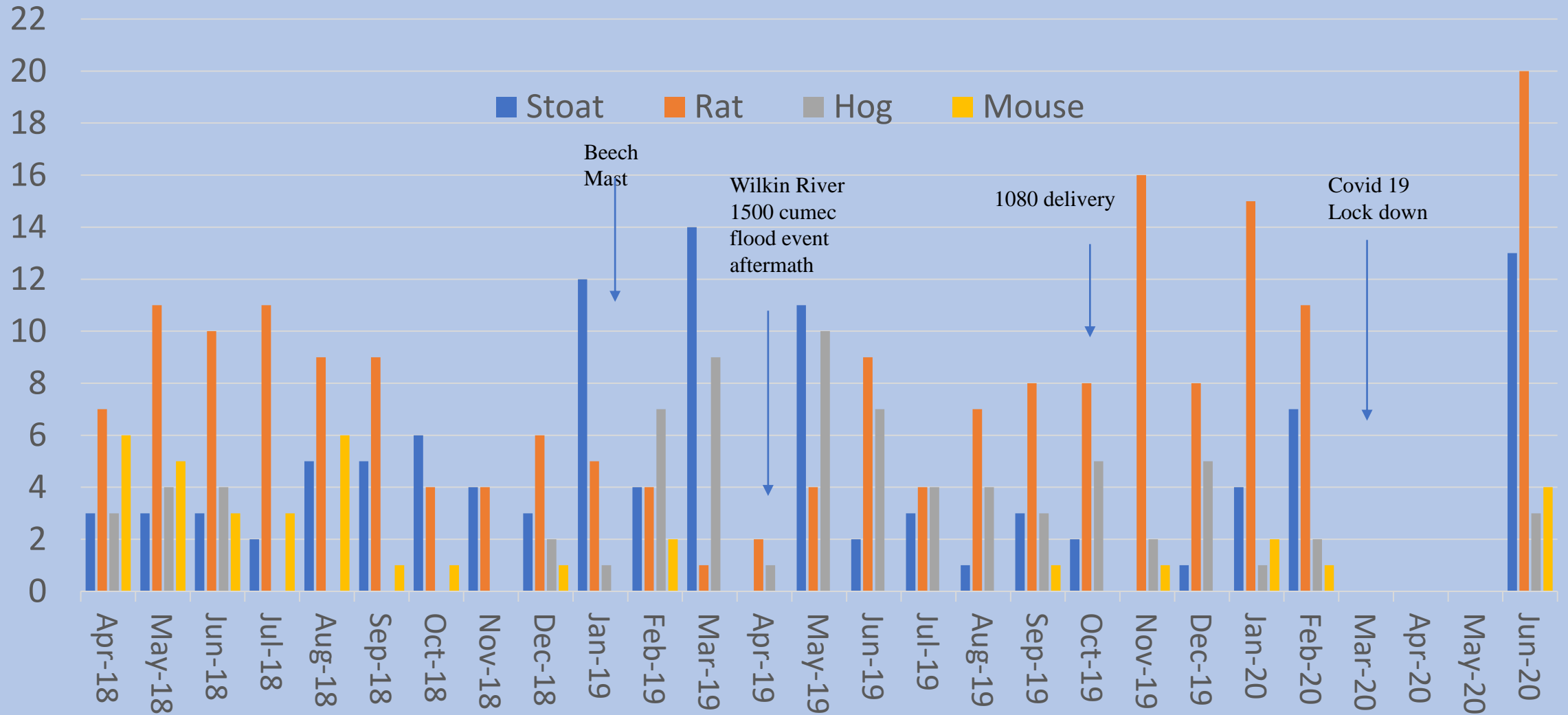
ABT Makarora braided river  
mammalian predator control:  
April 2018-June 2020

Hedgehog data only





# ABT Makarora Braided River Predator Kill April 2018-June 2020





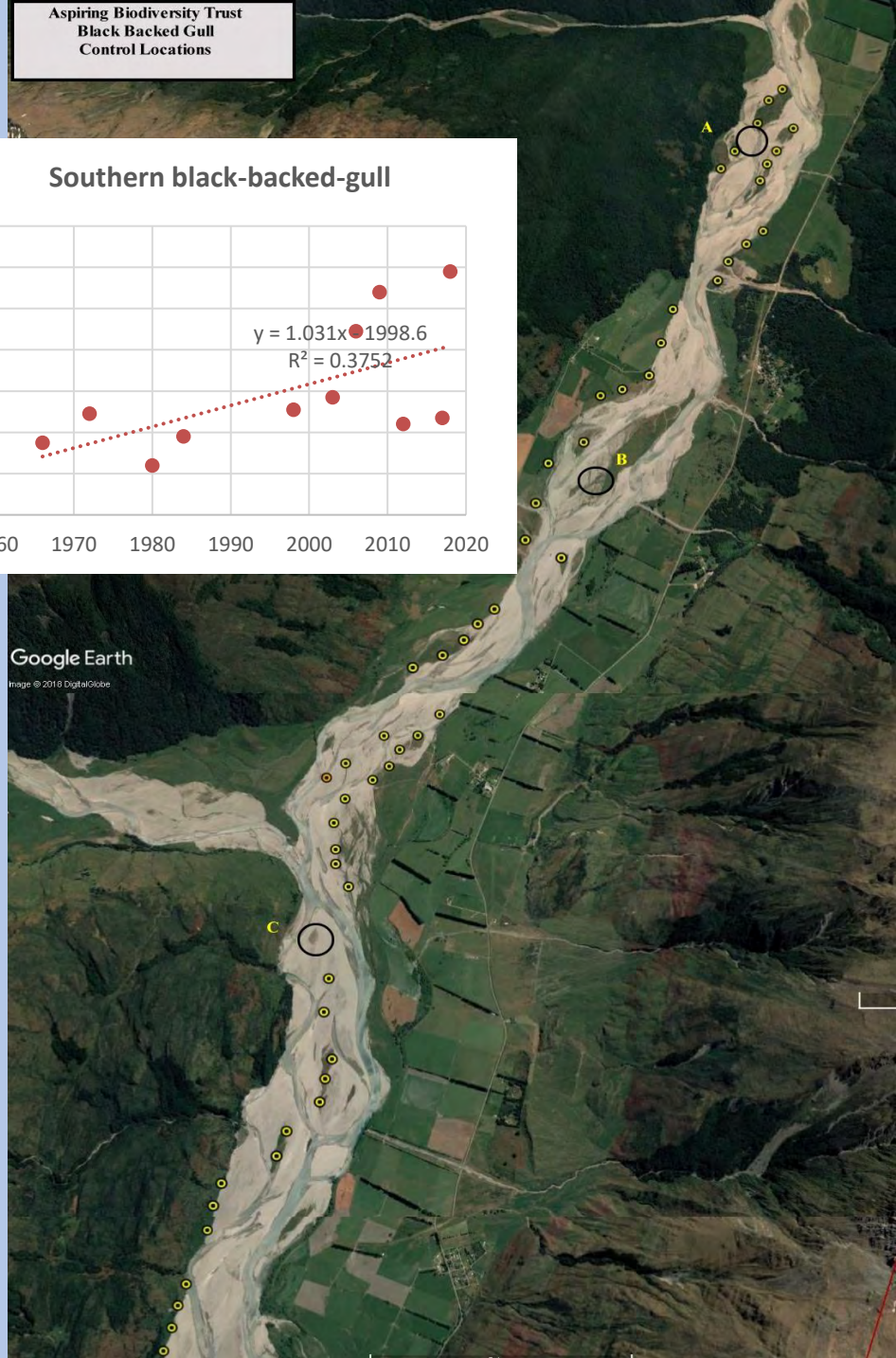
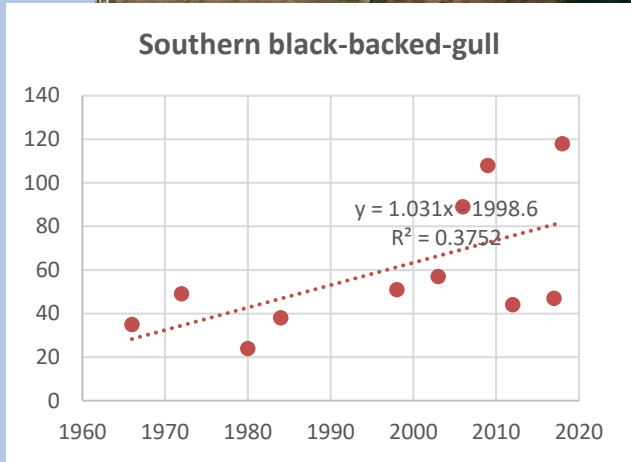
# Southern Black-backed Gull Control



Adult SBBG at nest site with a chick below (3-5 weeks).



NB: DOC SBBG data up to 2012



SBBG nest with eggs



Canadian goose nest

20/05/2018



**ABT**

GullTernNstLocations



Concern over use of Alpha-chloralose for avian predators due to nesting proximity to endangered spp.



# Predator Control Installation, Servicing and Bird Monitoring



04/07/2019



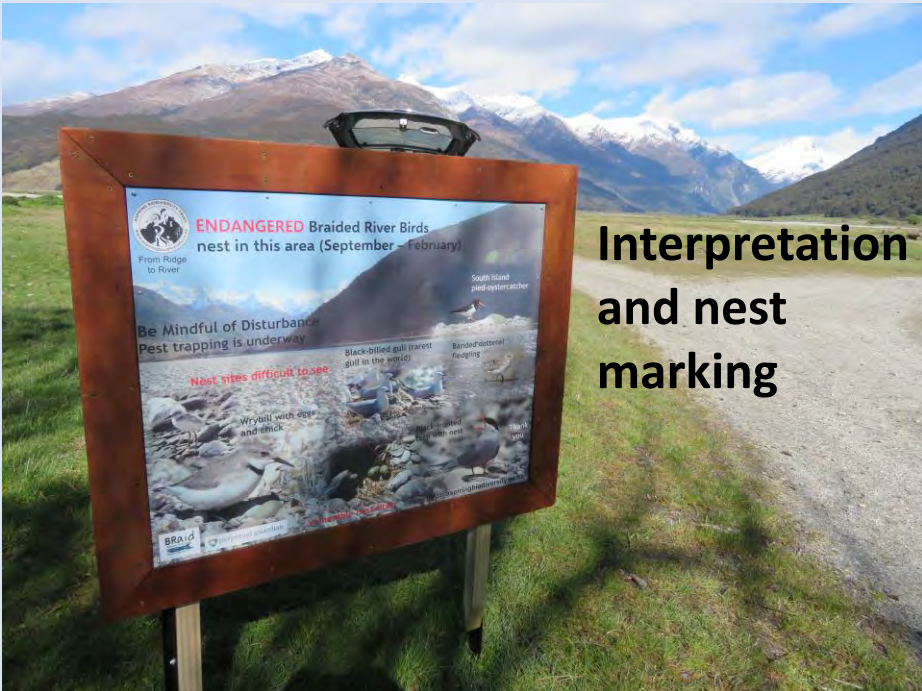
# Community Engagement

*Environmental  
Accreditation 2019*



*For continued awareness raising of  
braided river birds and their habitat;  
including public interpretation  
displays and presentations to parents*

**Makarora School**



**Interpretation  
and nest  
marking**

20/05/2018



**Backcountry  
Helicopters &  
Wilkin River Jets**



**Mt Albert  
Station**





Captain  
Rod  
Elliott  
Special  
thanks



# Acknowledgements

- With thanks to all trustees, volunteers, collaborators and supporters



NB: not all are represented here





With Thanks

