

Penguin Rescue

Annual Report 2017/18



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Penguin Rescue

www.penguins.org.nz

aka Katiki Point Penguin Refuge Charitable Trust

Our goal: remove Yellow-eyed penguins off the endangered species list

Our mission: providing sanctuary for penguins

Our work: optimise penguin habitat
maximise breeding success and survival
minimise human disturbance

- based at Katiki Point Lighthouse
- two Yellow-eyed penguin colonies:
 - Katiki Point
 - Okahau Point
- started 35 years ago by Janice and Bob Jones and Chris Lalas



Moeraki

Okahau Point

Katiki Point Lighthouse

Katiki Point

2017/18 season

Katiki Point: 27 nests

Okahau Point: 18 nests

Katiki Beach: 2 nests

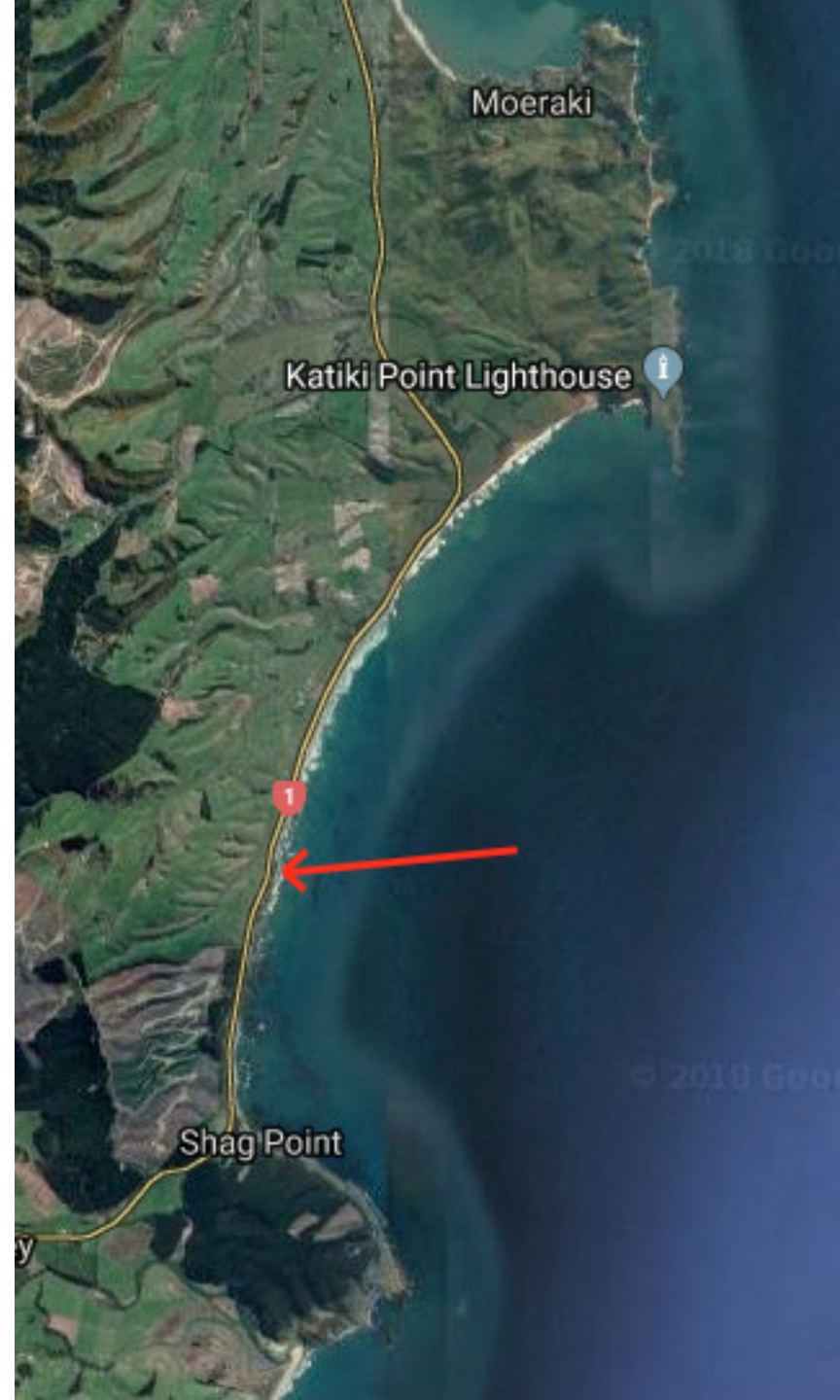
Shag Point: 0 nests

Katiki Beach

2 nests produced 2 chicks

1 pair ex Katiki Point –
moved 6.4 km

1 pair old male with
2-year old female



Shag Point

0 nests in 2017/18

2014/15 season: 1 nest

2015/16 season: 1 nest

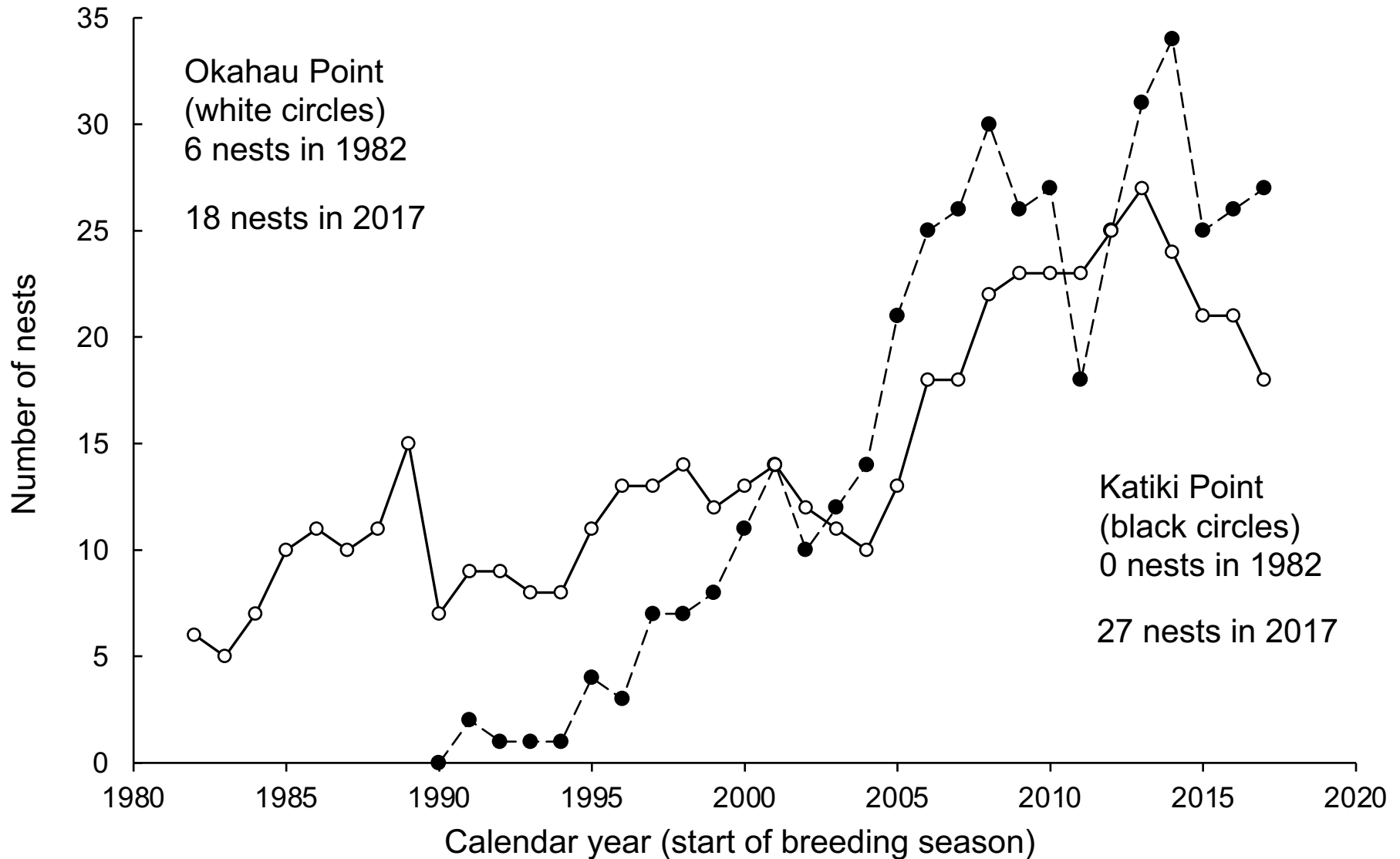
2016/17 season: 0 nest

Working agreement
between Penguin Rescue
and Doc for next 5 years

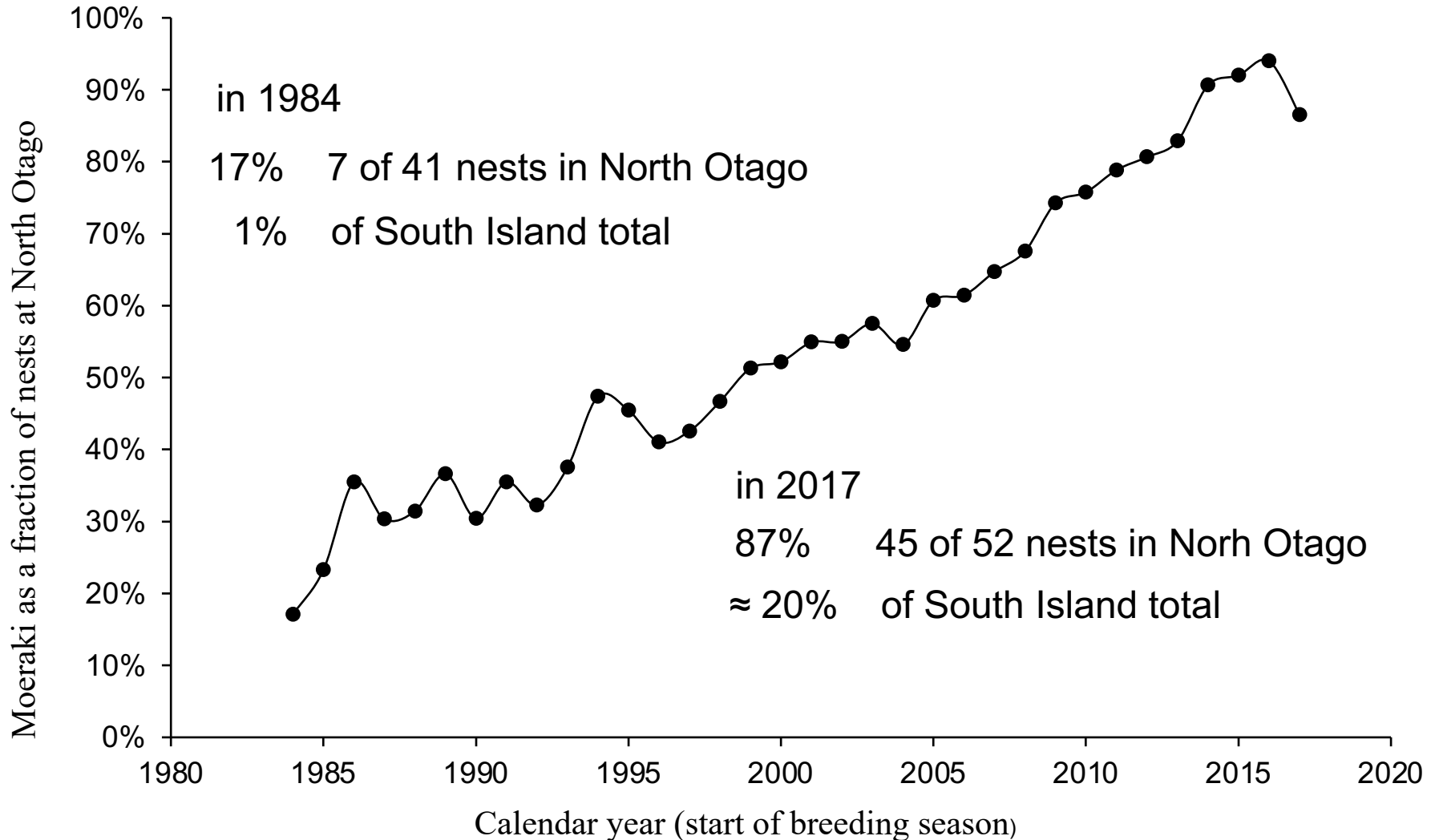
16 stoats, 9 rats, 3 hedgehogs
and 4 rabbits trapped and killed



Yellow-eyed penguin nests at Katiki Point and Okahau Point from 1982 to 2017

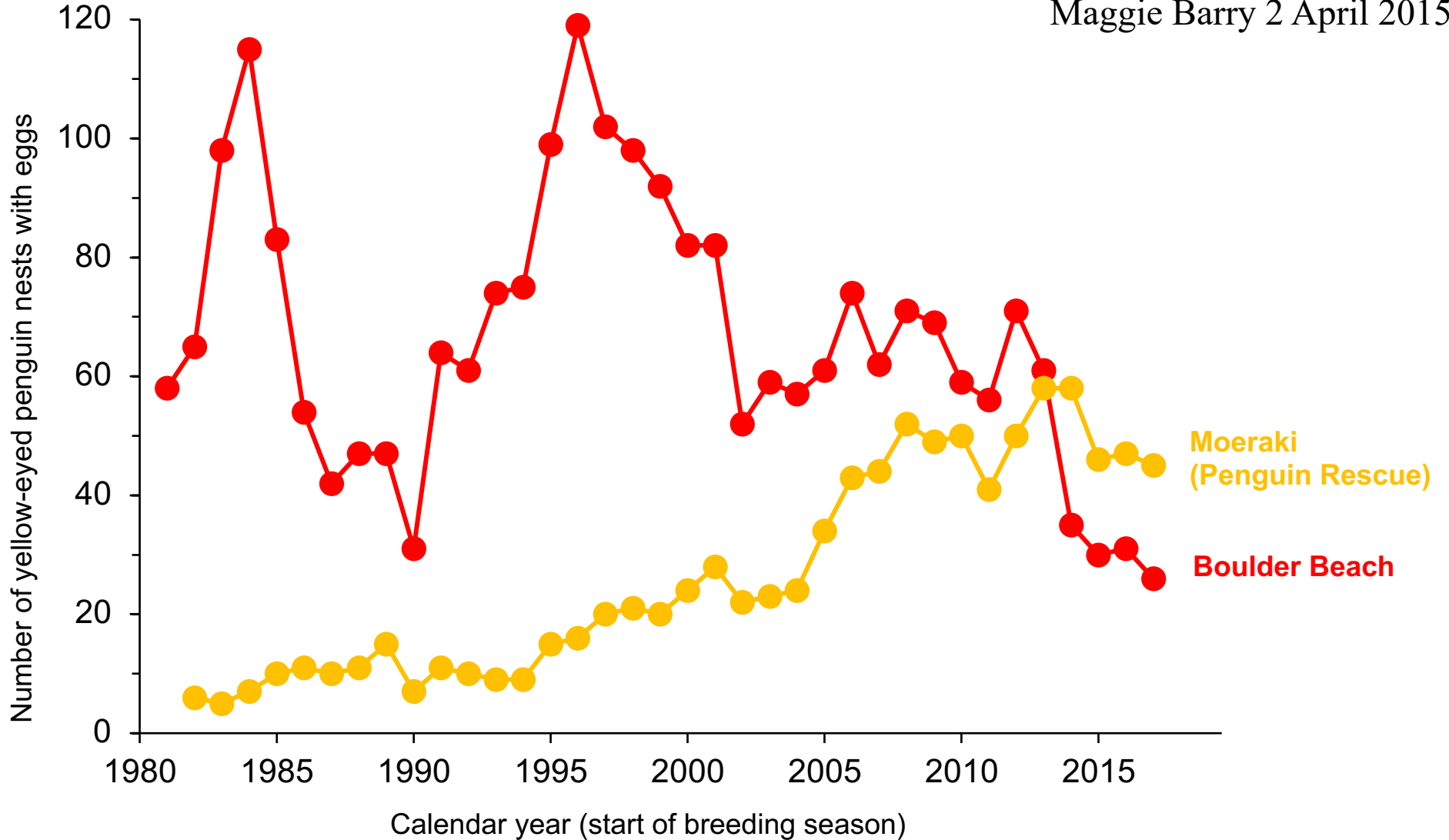


Yellow-eyed penguin nests at Moeraki as a proportion of all North Otago nests from 1984 to 2017

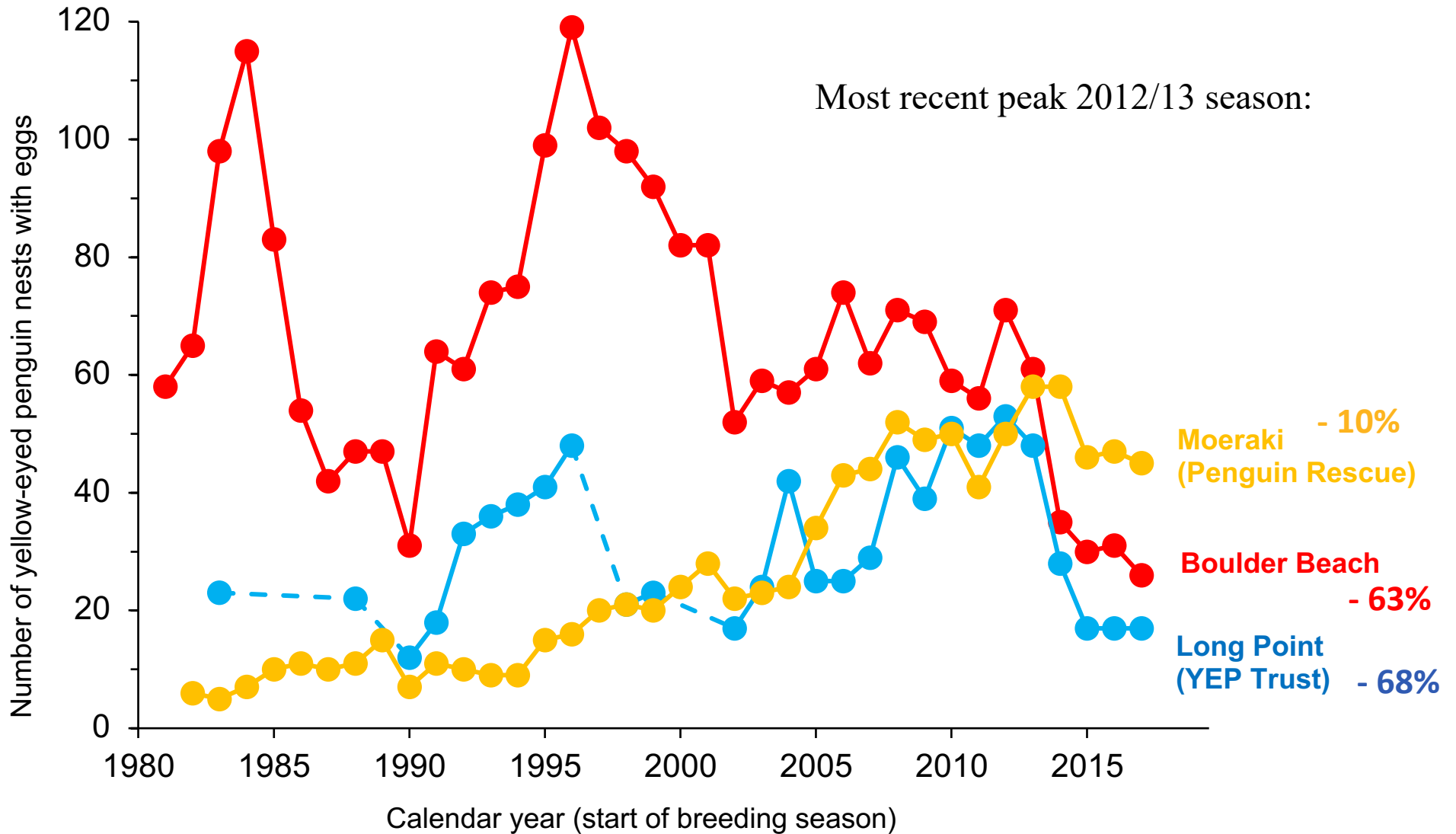


3 key mainland breeding sites for yellow-eyed penguins

Minister of Conservation
Maggie Barry 2 April 2015



3 key mainland breeding sites for yellow-eyed penguins



Minimum effect of rehabilitation effort on 2017/18 breeding pair numbers

Katiki Point: 27 females bred

17 (63%) have been rehabilitated and released

At best there would have been 10 nests

Okahau Point: 18 females bred

6 (33%) have been rehabilitated and released

At best there would have been 12 nests

Moeraki decline since 2012: - 56%

Rehabilitation July 2017 - June 2018

Yellow-eyed penguins:

	individuals	admissions	release rate of individuals
adults	30	32	93%
juveniles (1 yr old)	5	6	100%
pre-fledging chicks	16	16	81%
post-fledging chicks	3	5	67%
TOTAL	54	59	89%


Breeding success in 2017/18

	Katiki Point	Okahau Point
Number of nests	27	18
Fertility eggs hatched / laid	87% (45/52)	76% (26/34)
Chick survival chicks fledged/ hatched	64% (29/45)	81% (21/26)
Chicks raised per pair chicks fledged/ nest	1.07	1.17

Curiosities

- Okahau Point raised more chicks than Katiki Point
- Okahau Point Total 104 nest boxes

Forest (1 ha): 56  7 nests

Grazed paddock (3 ha): 48  10 nests



Predator control

- Predators killed
 - Katiki Point: 21 cats, 3 ferret, 8 stoats, 38 rats
 - Okahau Point: 11 cats, 13 ferrets, 0 stoats, 6 rats

No predation of yellow-eyed penguins or any other seabirds at either colony

4 main concerns in 2017/18

- Major outbreak of Diphtheria
- Malaria
- Interference by non-breeding males
- Tourism

Major outbreak of Diphtheria 17/18

		Katiki Point	Okahau Point
Number of chicks hatched		45	26
treated	Number	31 (69%)	16 (62%)
	Survival	24 (77%)	16 (100%)
untreated	Number	14 (31%)	10 (38%)
	Survival	7 (50%)	9 (90%)

Mitigating Diphtheria

- All chicks checked every other day for symptoms
7+ days old
- Symptoms: plaques, sunken neck, size, unequal chicks
- 5 consecutive days of Baytril or until symptoms are gone
- Sibling treated

Malaria

Dead in rehab:	3 pre-fledging chicks
	1 adult non-breeding female
	1 juvenile
Dead in the field:	2 pre-fledging chicks
	2 adult females (1 breeder, 1 non-breeder)
	4 adult males (2 breeders, 2 non-breeders)
Others:	1 female breeder ex rehab (Highcliff)
	2 female breeders (no diagnosis)

TOTAL: 14-16 individuals

Mitigating Malaria

- Mosquito proofing hospital with net
- Drain or treat all standing water in colonies and surrounding farm
- Mosquito traps around hospital and in colonies
- Learn to diagnose
- Treatment - ???

Interference by non-breeding males

1 chick killed

Mitigating:

Artificial egg

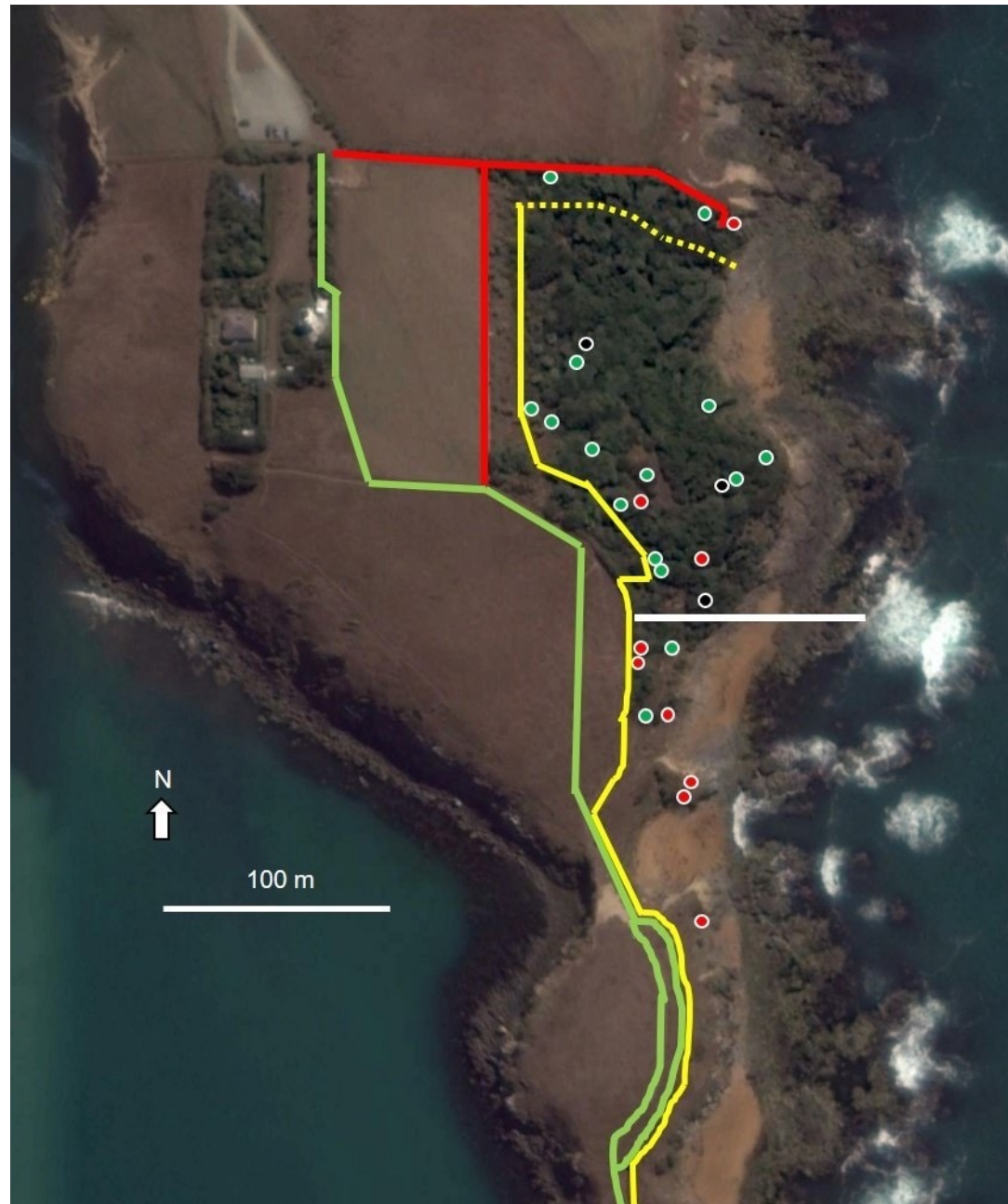
Prerequisite:

Nest site/box



Effect of the continued onslaught of uncontrolled tourists

- In 2014/15 season over 50% of chicks died <2weeks old at Katiki Point
- Internal fence built for 2015/16 season
- March 2017: red path closed
- Re-routing of tourists: green path



Effect of the continued onslaught of uncontrolled tourists

2017/18 season – 27 females:

- dead before the moult (3)
- sufficient weight (15)
- Underweight in moult (9)

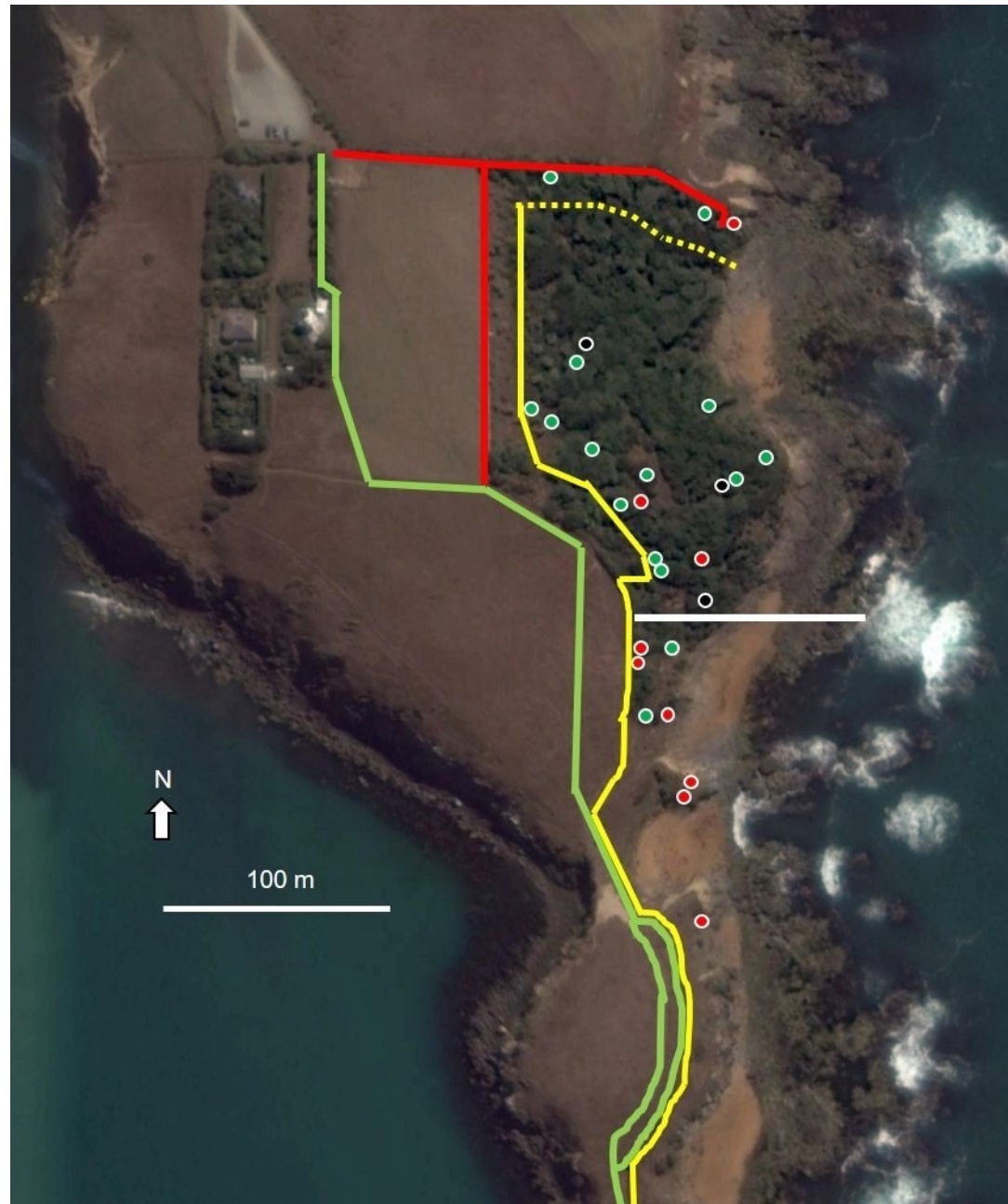
White line:

North: away from visitors (19-3)

- 3 rehabbed (19%)

South: close to visitors (8)

- 6 rehabbed (75%)



Effect of the continued onslaught of uncontrolled tourists

Katiki Point: North: away from visitors (19-3)

● 19% rehabbed (3)

South: close to visitors (8)

● 75% rehabbed (6)

Binomial test: $Z = 2.236$
 $p = 0.025$

+ 1 pre-breeding 2 year old female rehabbed

Okahau 18 females ● 17% rehabbed (3)

Katiki Beach: 2 females ● 50% rehabbed (1)

Conclusion: stress caused by uncontrolled visitors kills penguins

Mitigating the continued onslaught of uncontrolled tourists

- People counter was installed by DoC on 3 April 2017 – 35,000 people in 12 months
- Re-routing tourists away from the reserve (DoC)
- Building of internal fence 20m from colony edge (as suggested by DOC) – blocking penguins from crossing tourist path (PR)
- Find and rehab all penguins that need it (PR)

Penguin Rescue = ambulance at the bottom of the cliff

- Advocate for guided tours only at Katiki Point (PR)

= fence at the top of the cliff

To protect 20% of South Island
yellow-eyed penguin population

what is the cost?

\$ 52,500 spent

6512 hours volunteer work = 3.5 full time positions

23 volunteers; an average of 125 volunteer hours per week



Any questions?