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Social attractants for black-fronted terns

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Lincoln University Te Whare Wānaka o Aoraki AOTEAROA · NEW ZEALAND

BRIAN MASON SCIENTIFIC & TECHNICAL TRUST

THE ISAAC CONSERVATION AND WILDLIFE TRUST A study in conservation

Ashley Rakahuri RIVERCARE GROUP

Department of Conservation Te Papa Atawhai

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Black-fronted tern (*Chlidonidas Albostriatus*)

- Globally endangered
- Declining population of 5000-10,000
- Threats:
  - Flooding
  - Habitat degradation
  - Predation

Braided Rivers

- Highly dynamic systems
- High habitat turnover

- Difficult to manage
  - Long, linear systems
  - High predator immigration rates

Black-fronted Tern Management

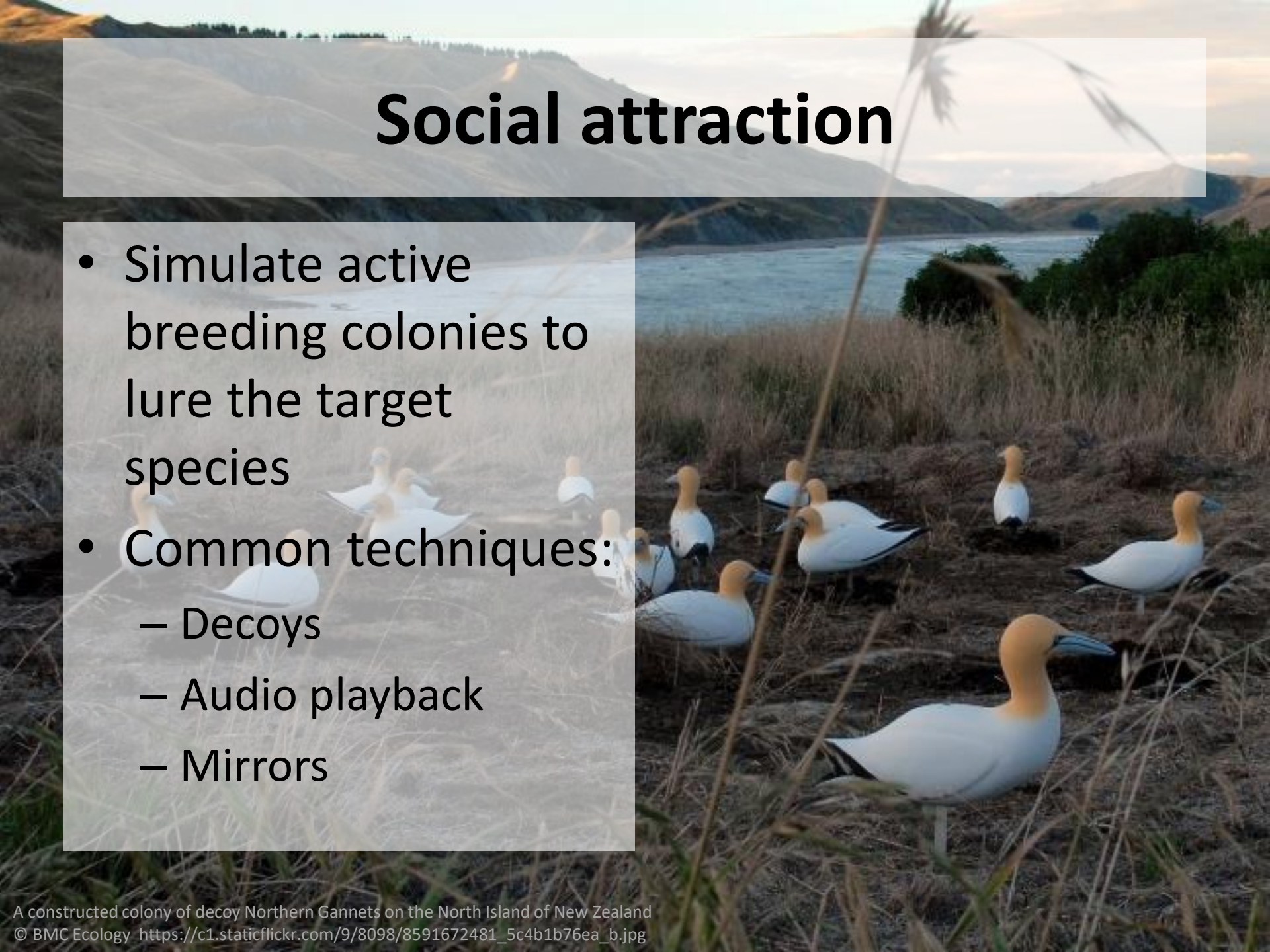
- Landscape scale

- Colony scale

Anderson 2013. Upper Ohau black-fronted tern predator-control project

Social attraction

- Simulate active breeding colonies to lure the target species
- Common techniques:
  - Decoys
  - Audio playback
  - Mirrors



A constructed colony of decoy Northern Gannets on the North Island of New Zealand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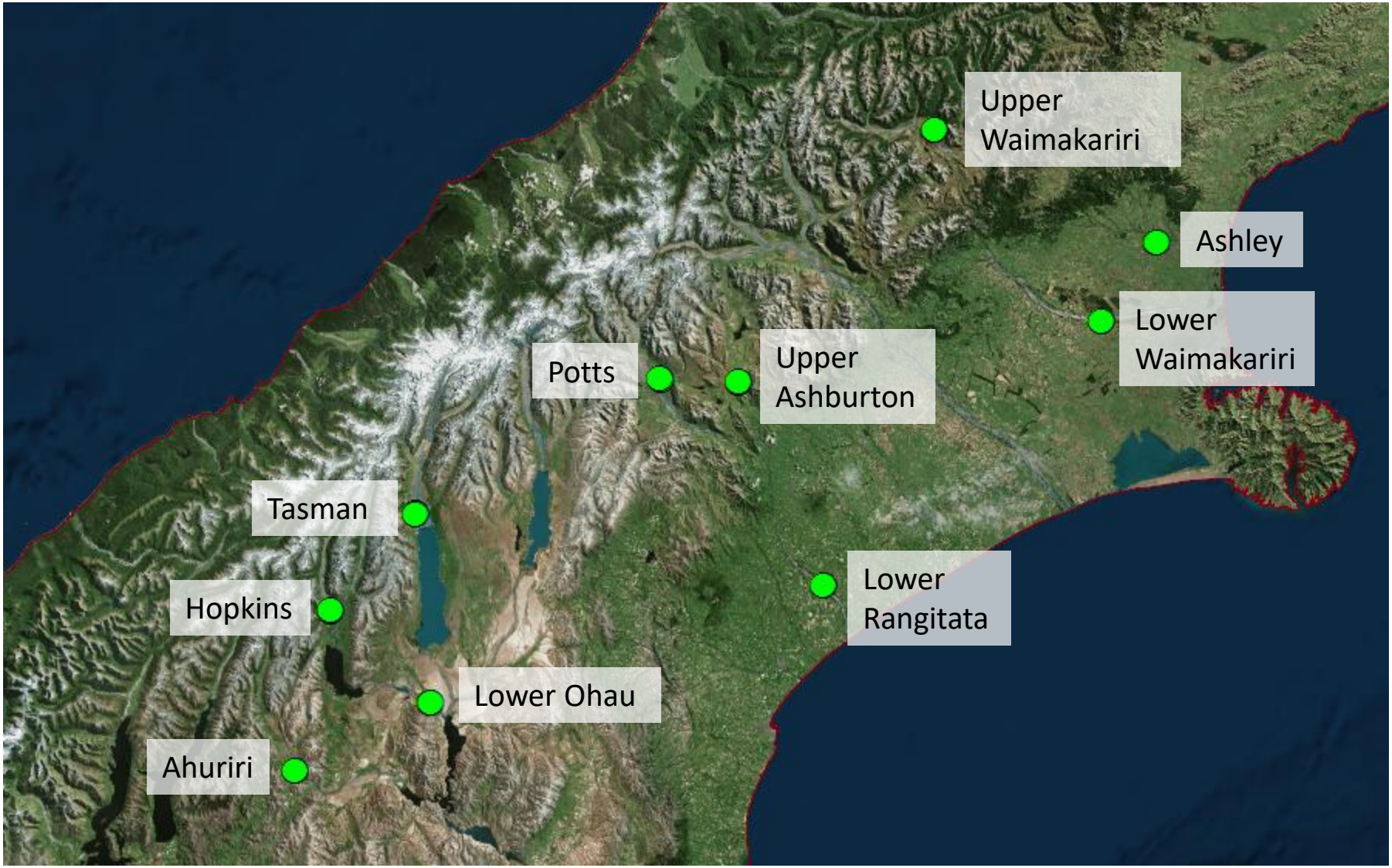
WILL SOCIAL ATTRACTION WORK FOR BLACK-FRONTED TERNS?


Upper Waimakariri
Ashley
Lower Waimakariri
Potts
Upper Ashburton
Tasman
Lower Rangitata
Hopkins
Lower Ohau
Ahuriri

Social Attractant Set Up

DOC electronics team

Black-fronted tern colony calls

Playback schedule:

-initially 1min on, 4min off

-changed to 10min, on 10min off

DOC electronics team

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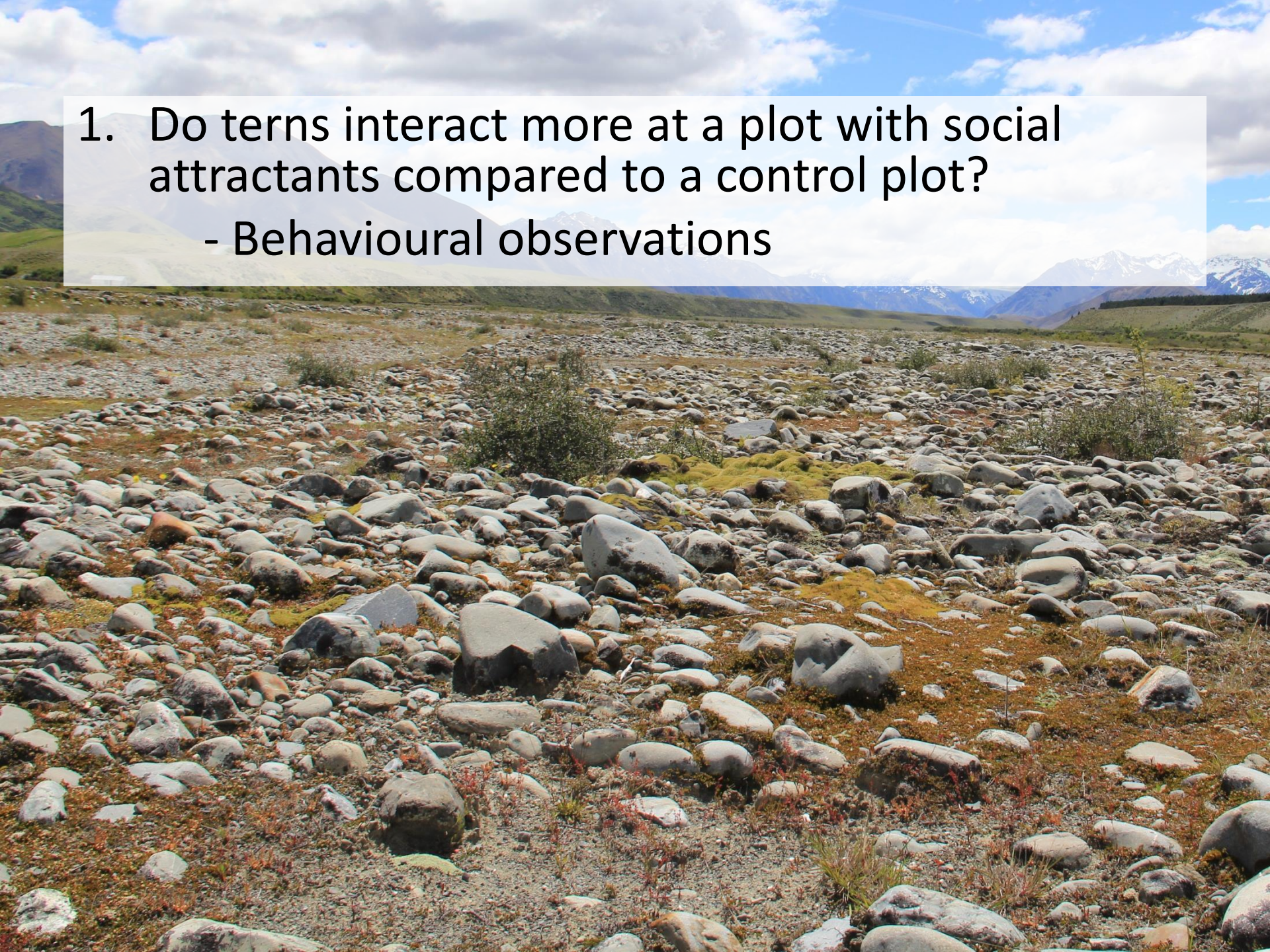

1. Do terns interact more at a plot with social attractants compared to a control plot?
   - Behavioural observations

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3. Are there habitat differences between my experimental plots and tern colonies?

    -Belt transects completed at experimental plots and nearest nesting sites

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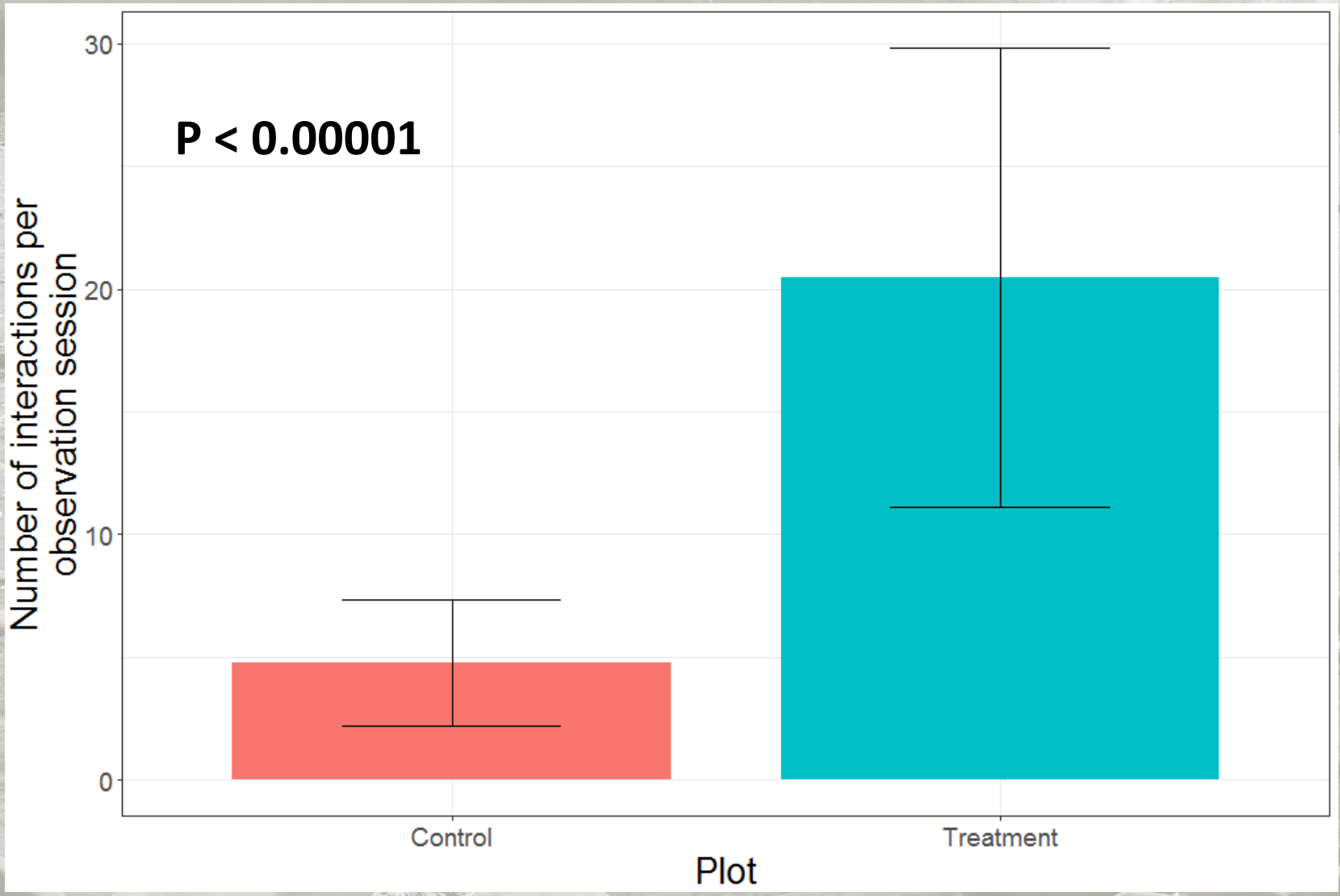
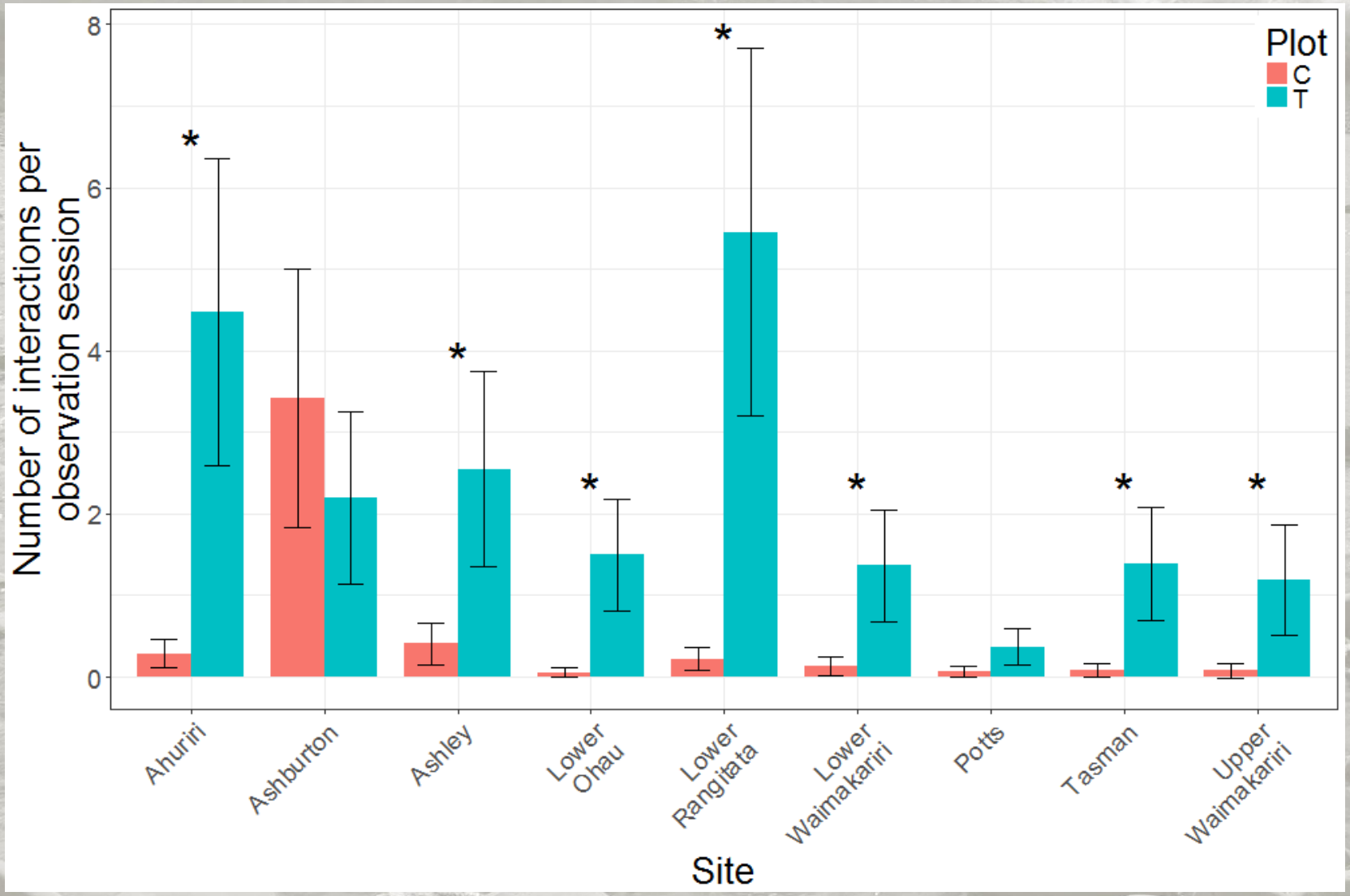
Behavioural Observations



Behavioural Observations



Nearest nesting activity

Site	Distance of nesting to nearest (m)
Ahuriri	217
Ashley	5259
Lower Ohau	45
Lower Rangitata	31
Lower Waimakariri	7452
Potts	269
Tasman	1761
Upper Ashburton	67

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< 300m

Habitat

- Habitat characteristics varied substantially between different rivers, plots and breeding/nonbreeding areas
- No consistent differences between experimental plots and tern nesting sites
- Habitat differences unable to explain differences in interaction

Conclusions

- Social attractants successfully attracted black-fronted terns to interact
- Social attractants likely contributed to tern nesting activity in proximity to plots
- Habitat differences were unable to account for differences in interaction or nesting activity

Future Research

- Most attractive set up
  - Focus on audio

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Future Research

- Most attractive set up
  - Focus on audio

Personal photo

Future Research

- Most attractive set up
  - Focus on audio
- Non-breeding tern interaction

Personal photo

Future Research

- Most attractive set up
  - Focus on audio
- Non-breeding tern interaction
- Other species:
  - Black-billed gull trials


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THANK YOU