

Exploiting fear for non-lethal cat management

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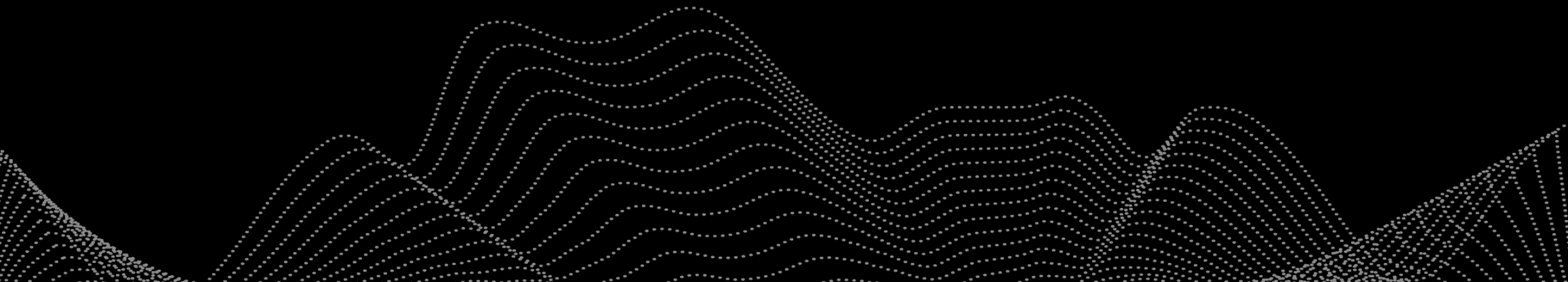
2. Conservation Science Partners, Truckee, California, U.S.A.



Manaaki Whenua
Landcare Research



CONSERVATION
SCIENCE PARTNERS





Background and motivation

- Cats as companion animals
 - 41% households at least 1 cat
- Cats roaming the outdoors





Background and motivation

- Cats as natural predators



- The conflict

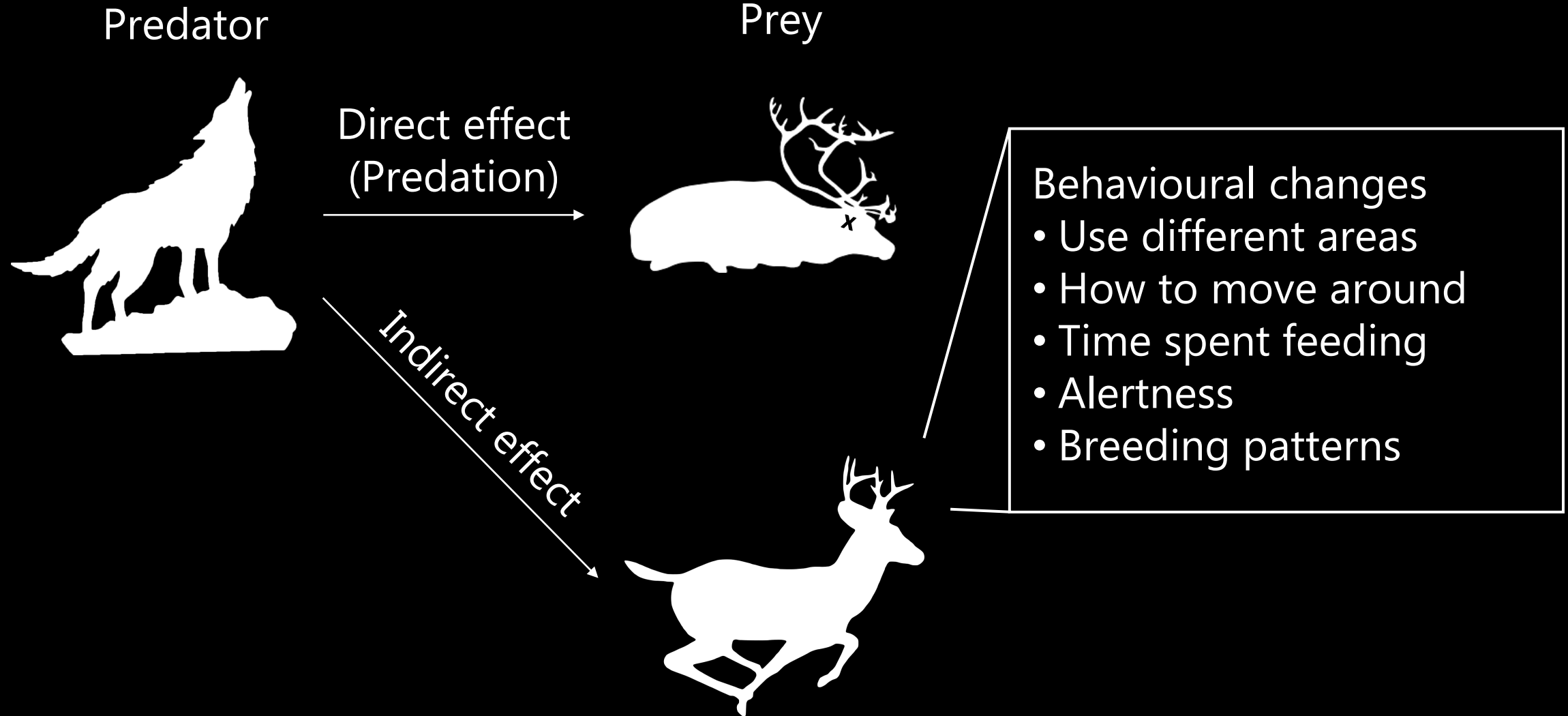


Social research:

- Cat owners less likely to support legislation
- <1% support cat containment

Middle ground?

The scientific theory...





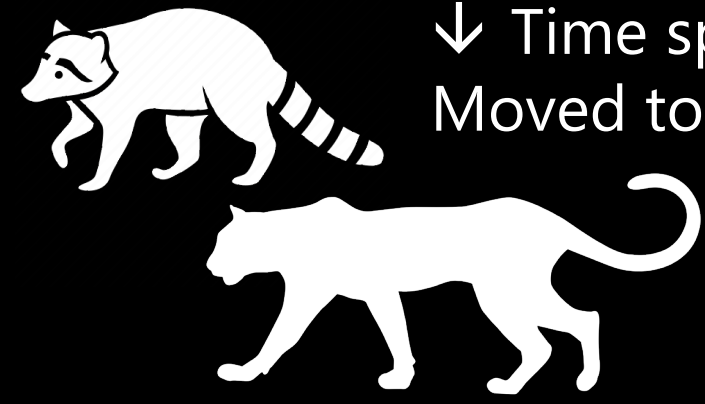
Urban Landscape

Predator

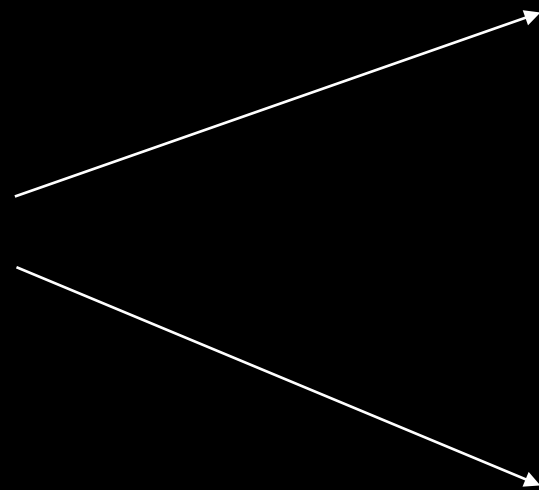
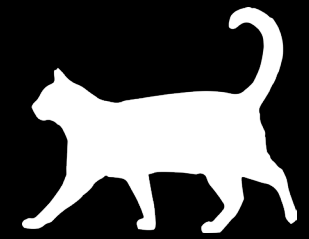
Prey

North America

↓ Time spent feeding
Moved to different area







New Zealand?





Exploiting Fear for Cat Management in NZ

Phase 1: Behavioural trial

- Objective: To understand behaviour of feral cats in response to sounds representing risks
- Risky sounds: dog barking , human talking , aggressive cats 
- Non-risky sounds (control): cricket 

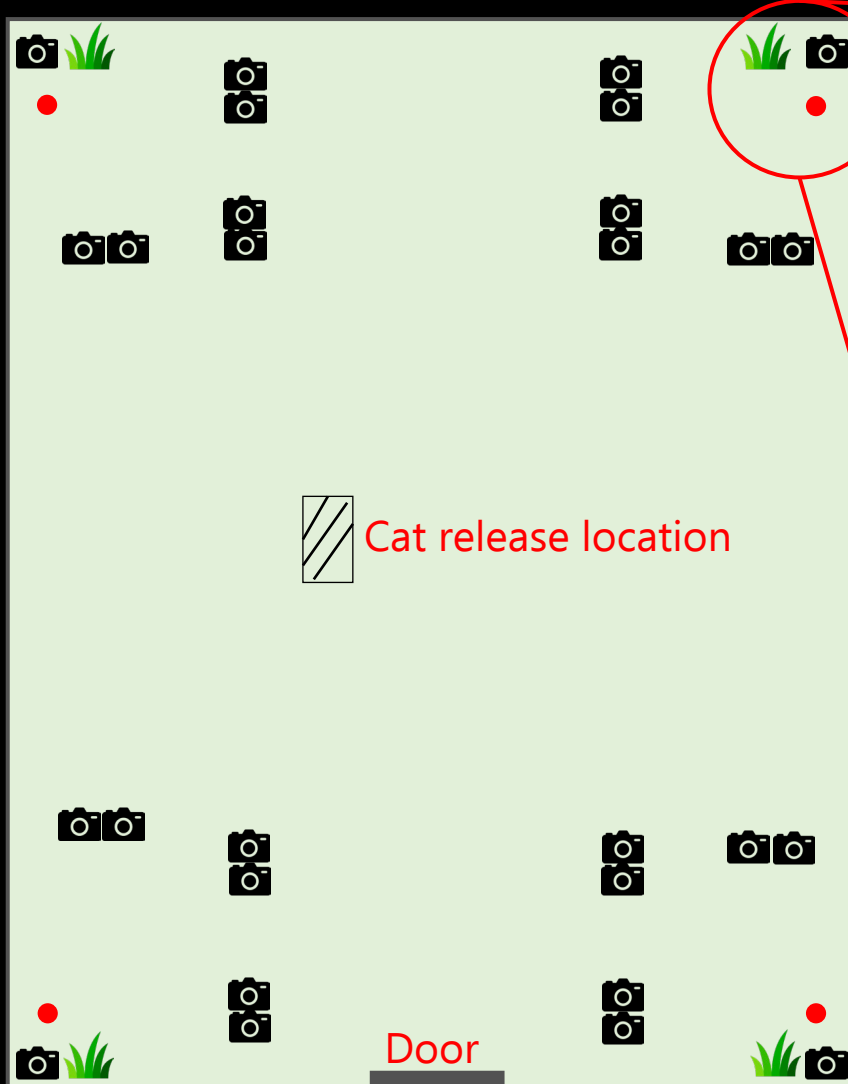
Phase 2: Field trial

- Objective: To test the effectiveness of using risky sounds identified from the behavioural trial to change domestic cats' behaviour in urban environments



Phase 1: Behavioural trial

1ha Area

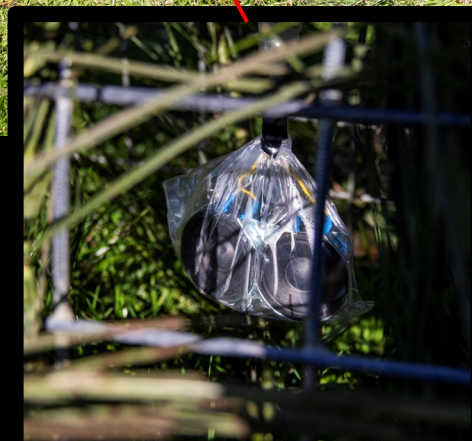
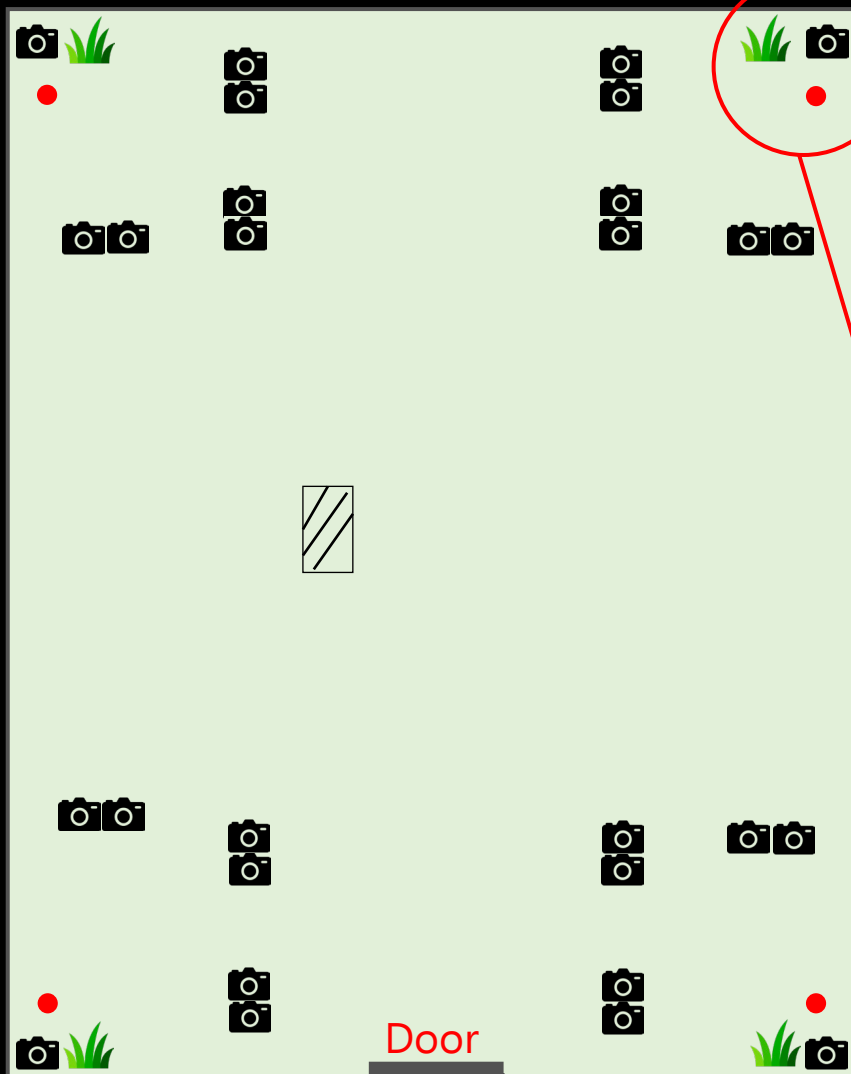


25g chicken mince



Phase 1: Behavioural trial

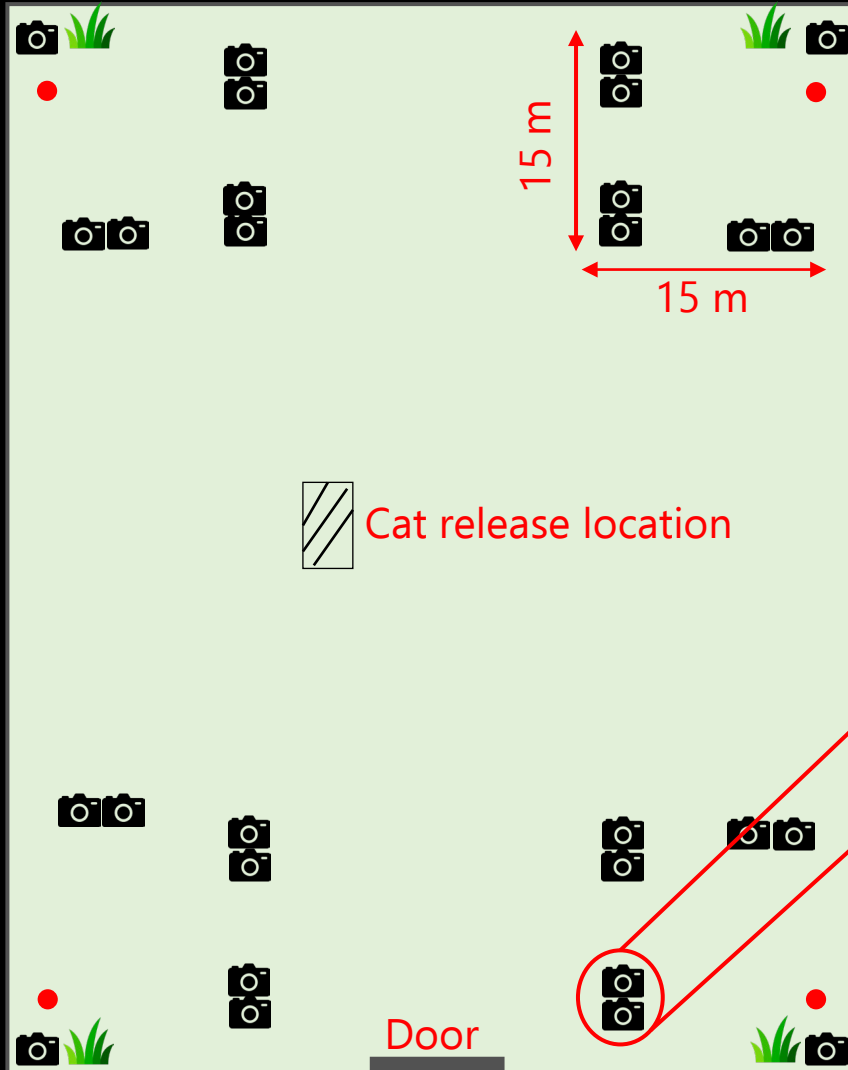
1ha Area





Phase 1: Behavioural trial

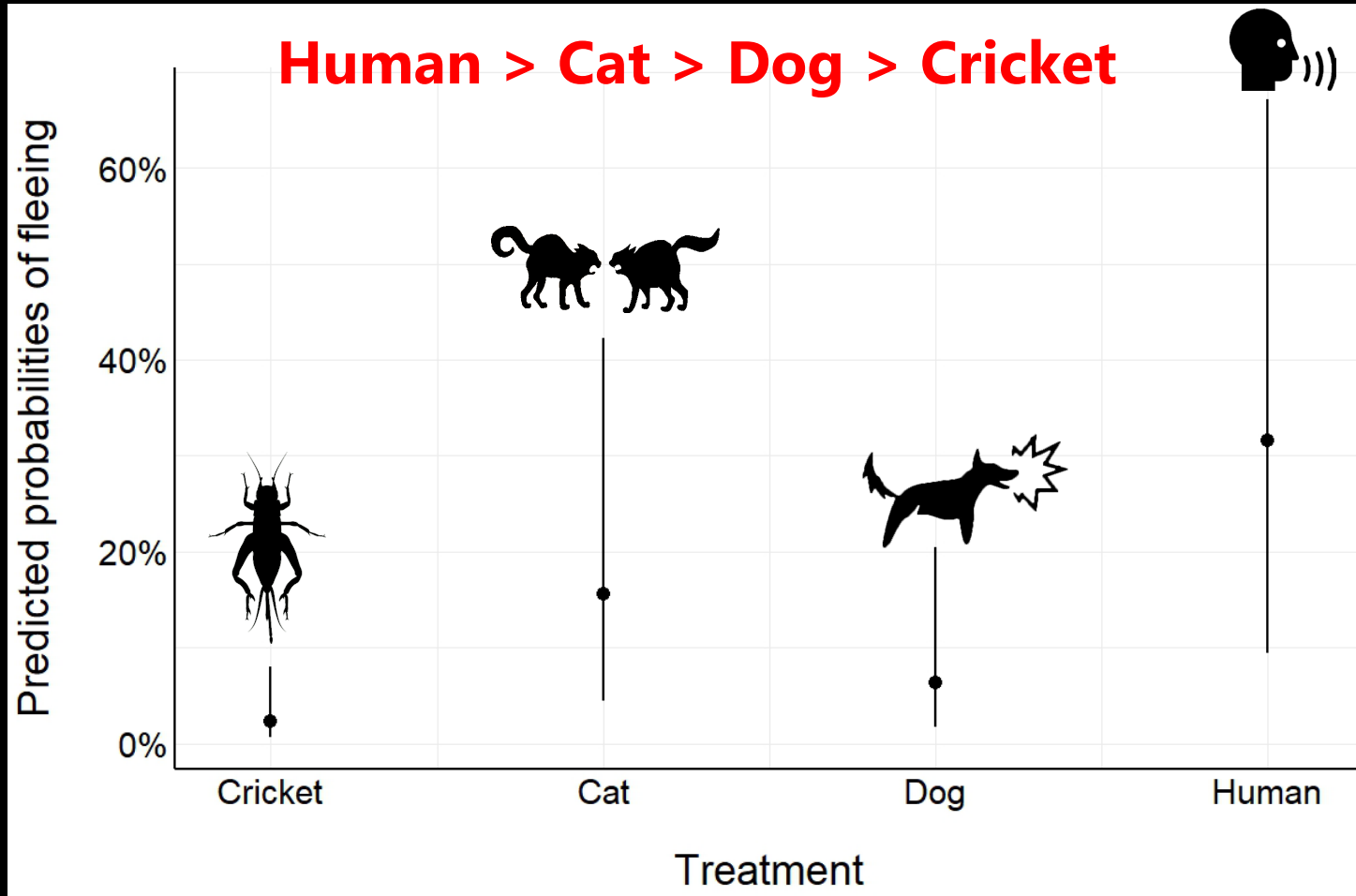
1ha Area



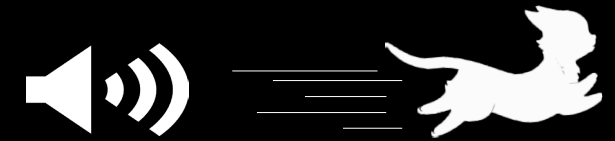


Phase 1: Behavioural trial - Preliminary Results

Number of cats: 22 cats (16 ♂ 6 ♀)

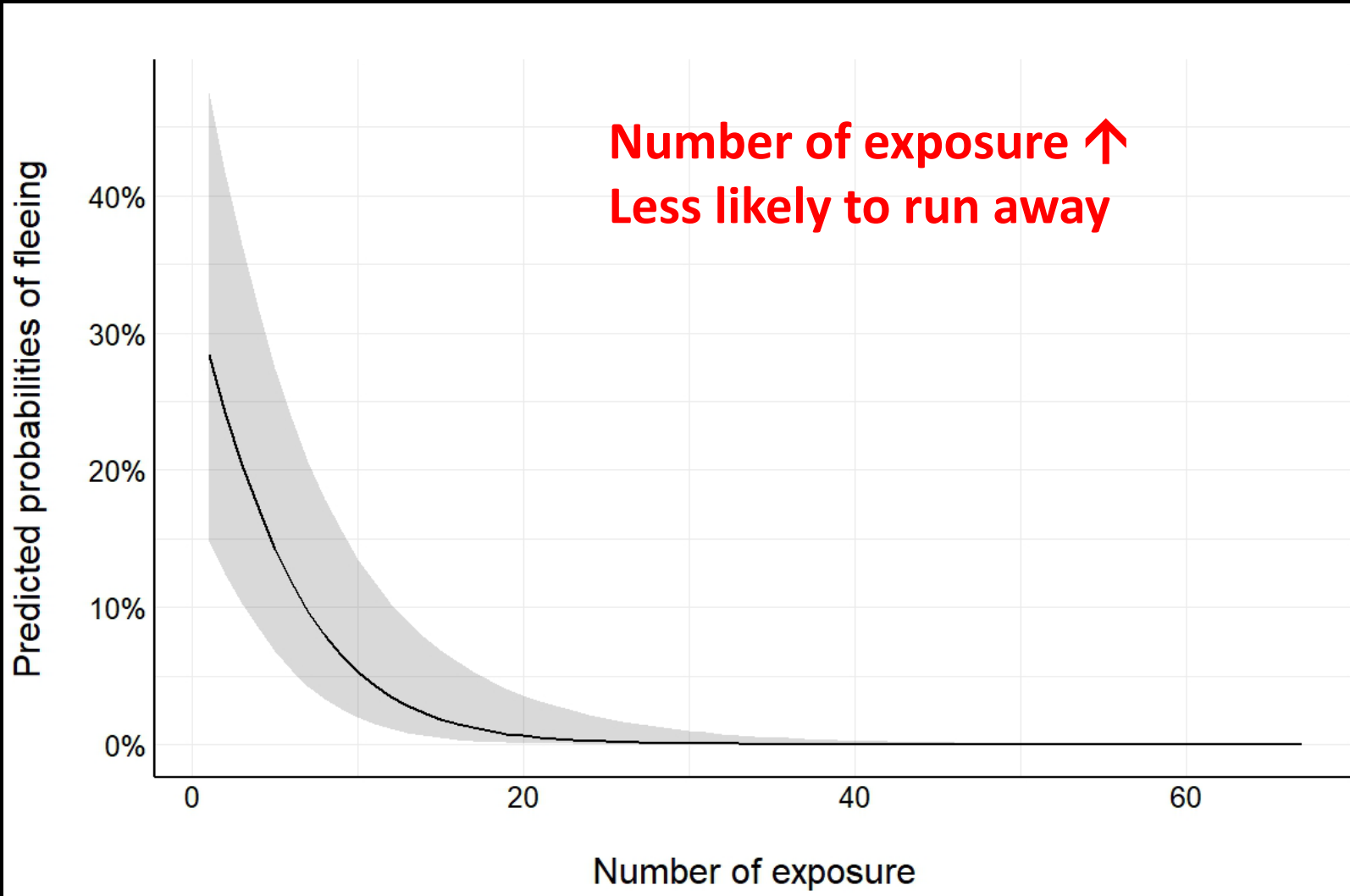


Fleeing behaviour
(Running away):

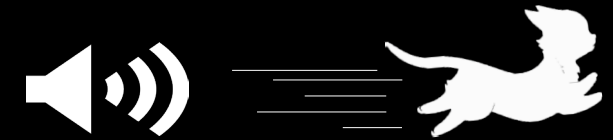




Phase 1: Behavioural trial - Preliminary Results



Fleeing behaviour
(Running away):





Phase 1: Behavioural trial - Preliminary Results

Example – Cricket (Control)





Phase 1: Behavioural trial - Preliminary Results

Example – human talking

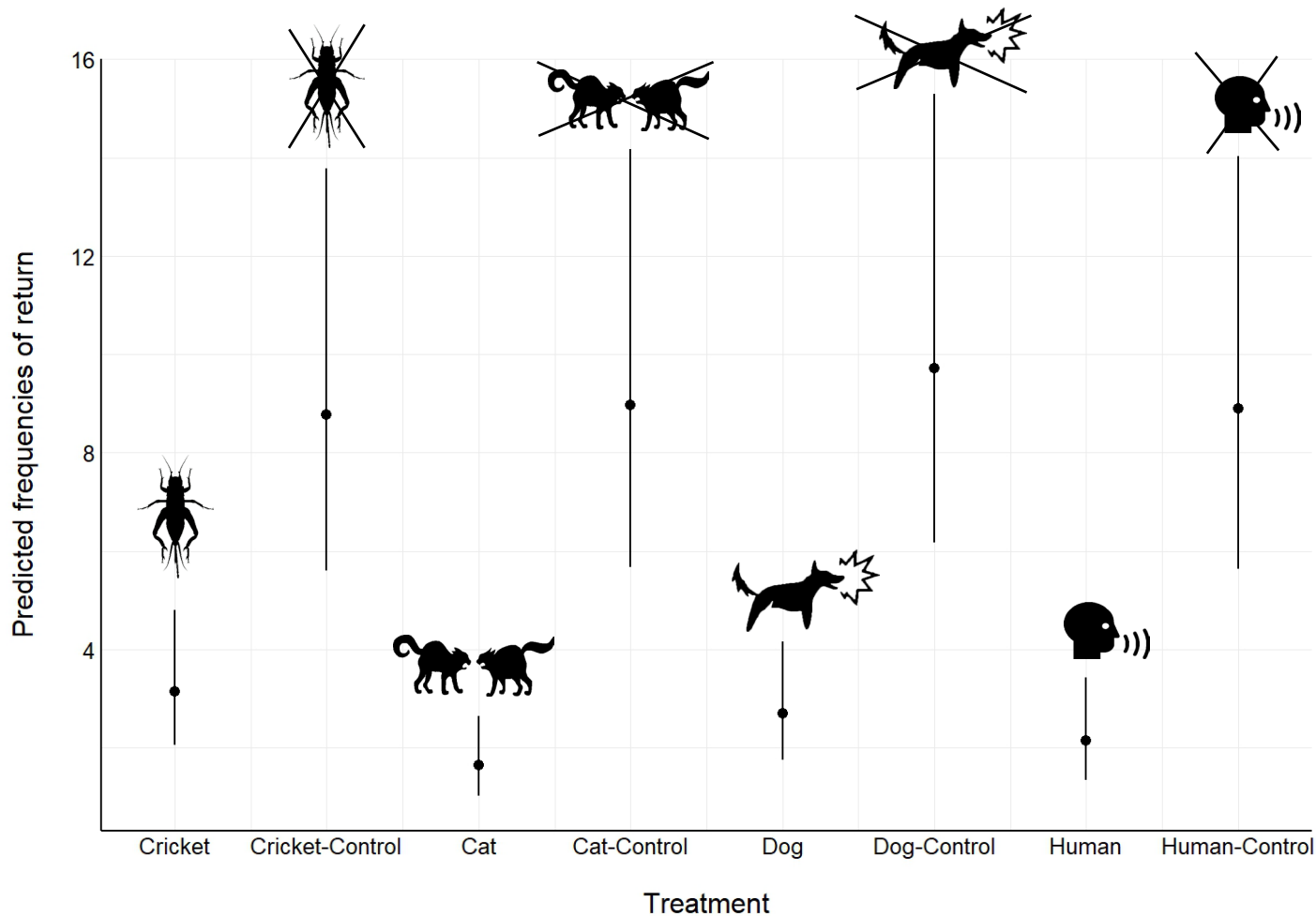




Phase 1: Behavioural trial - Preliminary Results

Number of times returning:

Human & Cat < Cricket ; areas without sounds > area with sounds

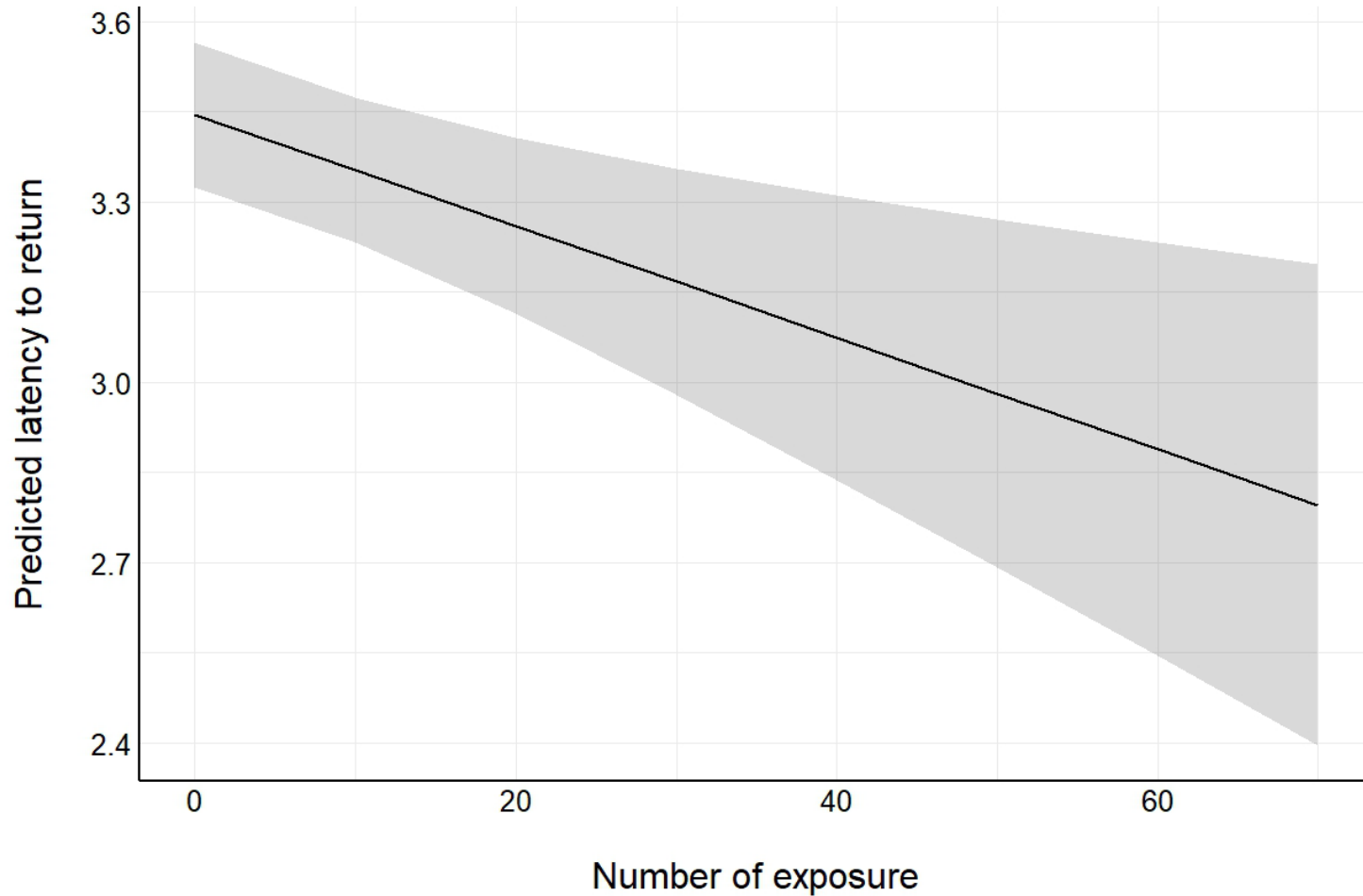




Phase 1: Behavioural trial - Preliminary Results

Time taken to return:

Number of exposures to sounds ↑ Time taken to return ↓

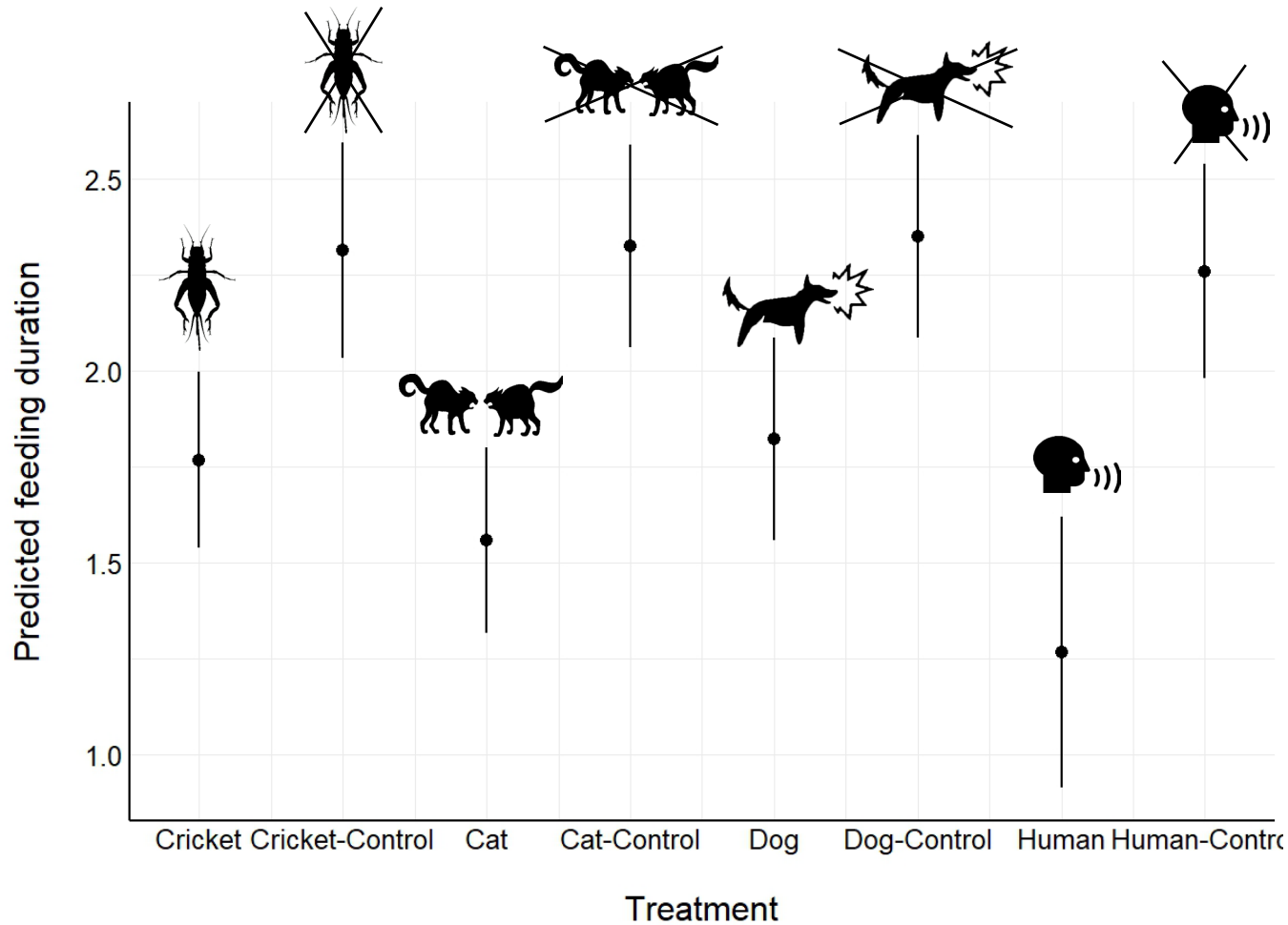




Phase 1: Behavioural trial - Preliminary Results

Total time spent feeding:

Human < Cricket ; Areas without sounds > area with sounds





Phase 1: Garden trial

1st week: baseline, no sounds -> 2nd week: Cricket (or human) -> 3rd week: Human (or cricket)



Lure

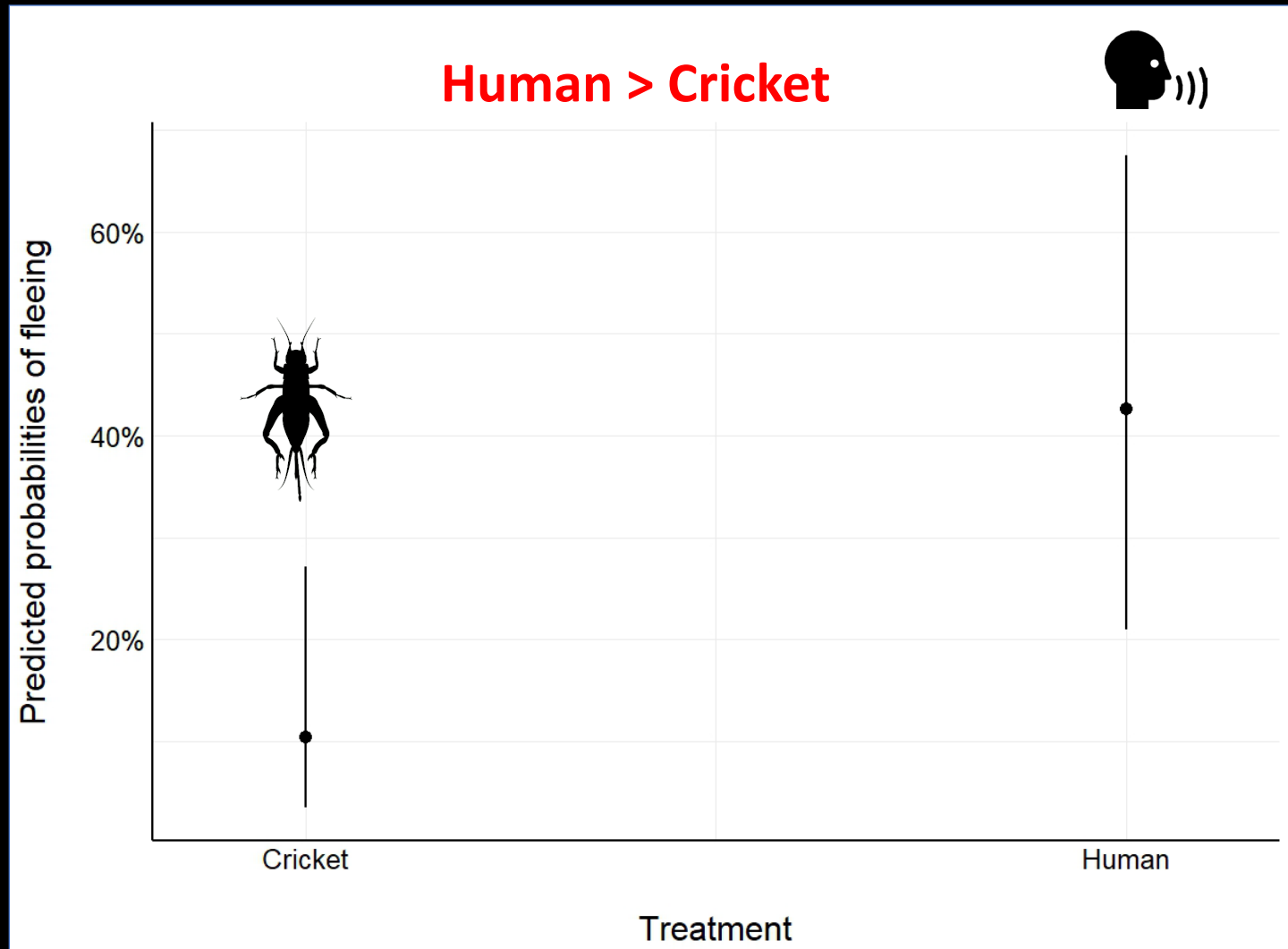


Speakers

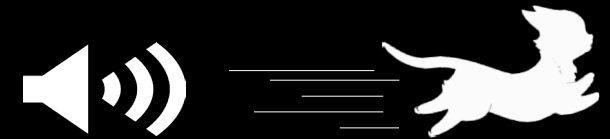


Phase 1: Garden trial – preliminary results

6 gardens in Christchurch; 30 cats exposed to sounds



Fleeing behaviour
(Running away):





Phase 1: Garden trial – preliminary results

Example – Cricket (Control)

2022-03-28 04:29:04

M

☀ 12°C



CAM636

RECONYX



Phase 1: Garden trial – preliminary results

Example – human talking

2022-04-02 00:15:21

M

☁ 14°C



CAM640

RECONYX



Phase 2: Field trial

- Motion-triggered cameras & speakers in urban reserves
- 1 month no sounds (baseline) -> 1 month human -> 1 month cricket -> 1 month cat
- Domestic cat tracking





Acknowledgements



Manaaki Whenua Wildlife Ecology and Management Team

