רמת הנדיב
Ramat Hanadiv رمات هنديف

Conservation Biology & Biodiversity

The School of Zoology
Ecology Evolution and Behaviour
Faculty of Life Sciences | Tel Aviv University

בית הספר לזואולוגיה
אקולוגיה אבולוציה והתנהגות

Mitigation of Common Myna (*Acridotheres tristis*) activity and presence in protected areas

Eli Finarov

Supervisors:
Prof. Shai Meiri
Dr. Uri Roll
Prof. Assaf Shwartz

Introduction

Invasive species management

- Prevention
- Eradication
- Control

Introduction

Common myna (Acridotheres tristis) native distribution (from Birdlife 2019)

Common myna characteristics

- Omnivorous
- Monogamous
- Generalist
- Social
- Aggressive
- Cavity nester
- Thrives in disrupted habitats
- Highly adaptable

Cramp and Perrins, 1994; Grarock et al., 2014

Introduction

Common mynas negatively affect local species via competition over food, nesting hollows and territories and cause displacement of native birds

One of the 100 worst invasive alien species in the world by the IUCN (2013)

Photo : Jim Thomson

Introduction

In Australia, researchers found a negative relationship between the establishment of the myna and the long-term abundance of eleven bird species (Grarock et al., 2012)

Introduction

The population of local bird species in New Zealand increased dramatically following a trapping effort of mynas which reduced their population size (Tindall et al., 2007)

Introduction

The common myna in Israel

Introduction

Problems caused by mynas in Israel

- Human nuisance
- Crop Damage
- Ecological impact

Photo: Carmel Tadmor

Introduction

Mynas have been spotted competing with local species of birds, and preying on local species reptiles (Roll et al., 2007)

Photos: Carmel Tadmor

Introduction

Myna presence and competition over nesting cavities negatively affects the breeding success of Israeli native bird species (Charter et al., 2016)

Photos: Carmel Tadmor

Introduction

Photos: Yaniv Levy Paz

The Problem

The local distribution range of the myna is expanding

Its populations is spreading from human-dominated areas to more natural environments and protected areas

Protected areas are vital for conserving biodiversity

Threat to the Biodiversity in Israel

Research objective

Examine different control methods to mitigate presence and activity of mynas in protected areas

Research questions

1) Do habitat characteristics influence mynas' distribution in protected areas?

2) Do different control measures influence mynas' abundance in protected areas?

Methods and materials

Study Sites

Methods and materials

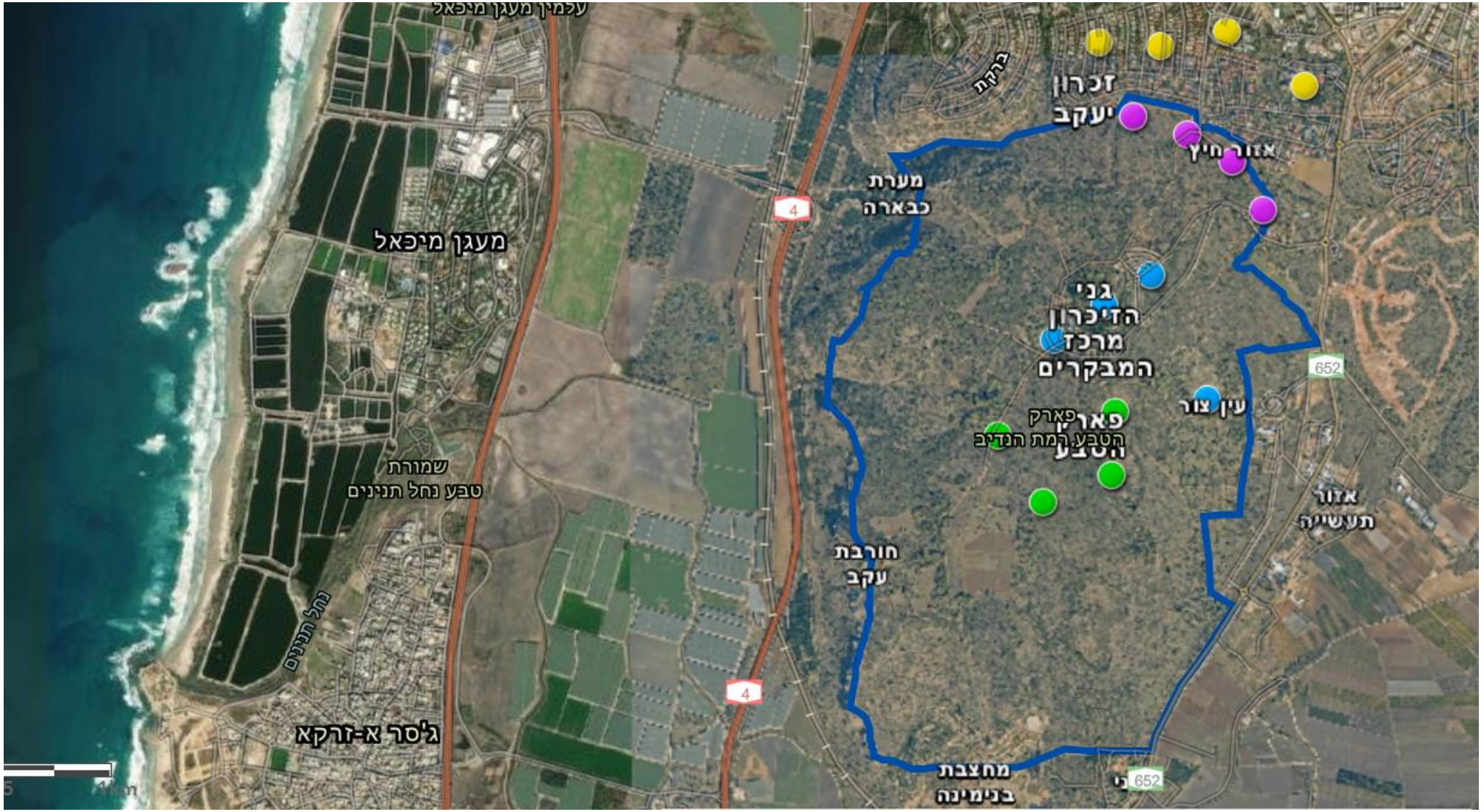
Study Sites

- Yarkon National Park
- Ashkelon National Park
- Ein Hemed National Park
- Castel National Park

Methods and materials

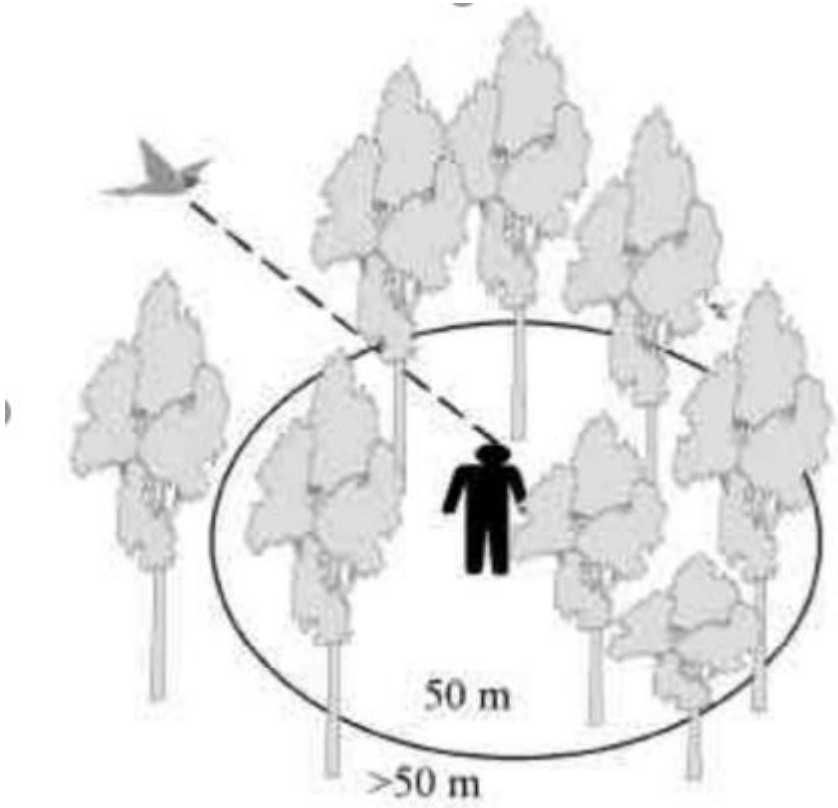
Myna census

- Urban
- Buffer zone
- Visitor
- Garrigue



Methods and materials

Myna census



Methods and materials

Trapping experiment

Methods and materials

Grass cutting manipulation

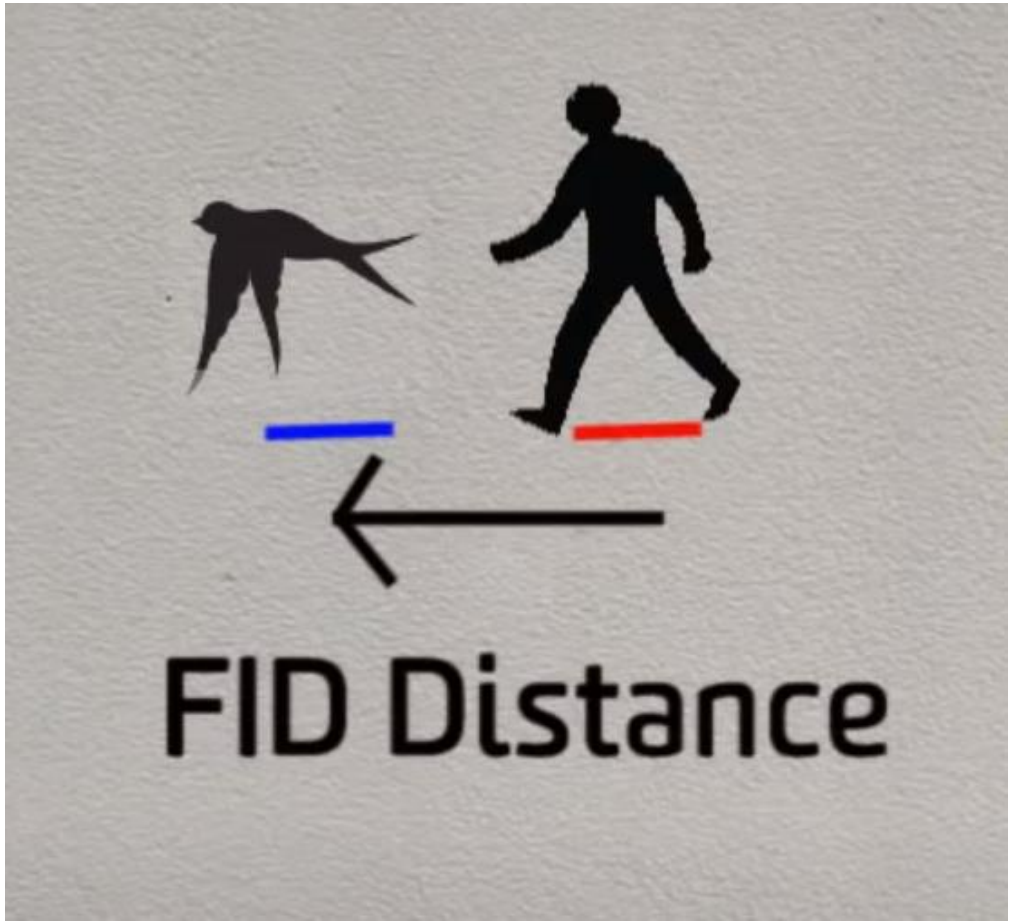
Methods and materials

Robo-hawk experiment

Photo: Ohad Hatzofe

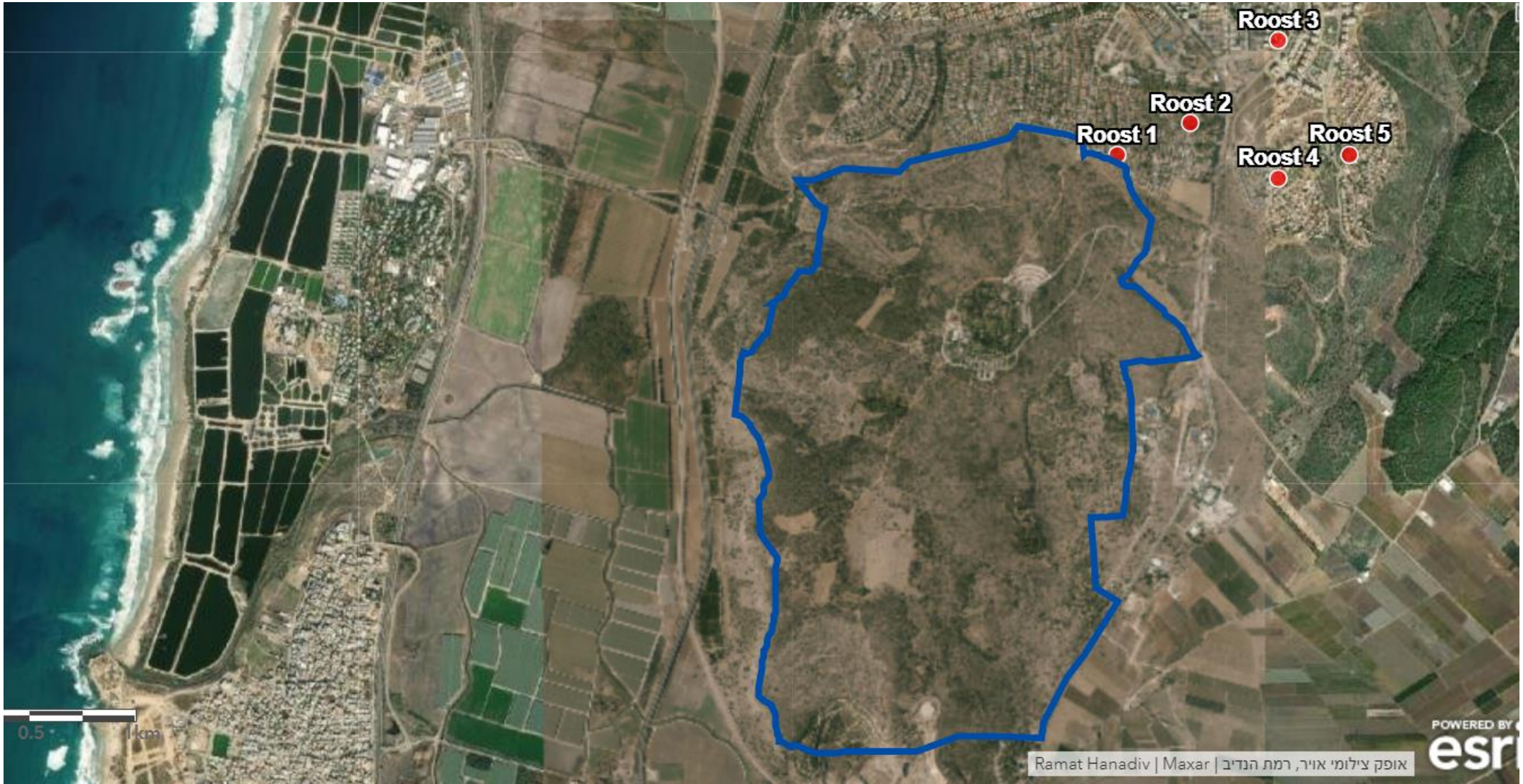
FID test

FID – flight initiation distance



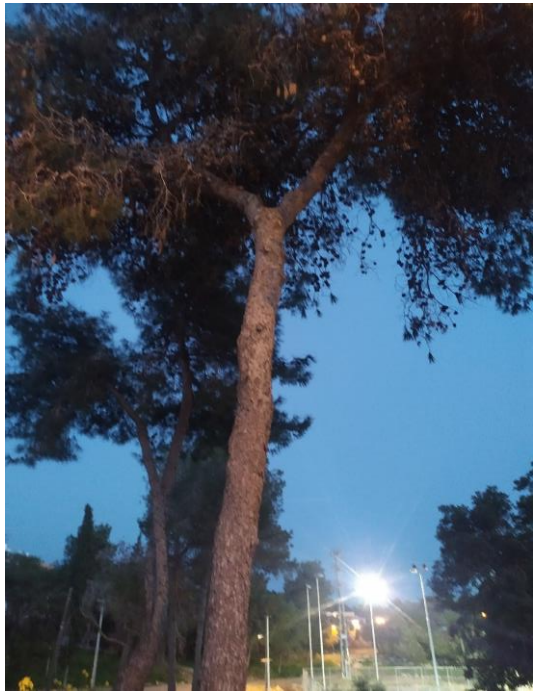
Preliminary results

Roost identification



Preliminary results

Roost counts

~ 500

Preliminary results

Myna Census

Myna abundance in the buffer zone is the highest

Mynas are active in the natural areas

Symbiotic relationship between mynas and cattle

Research importance

1) Protect national parks, nature reserves and local bird species

2) Establish a practical protocol for myna management in protected areas

Thank you!

Ramat Hanadiv: Liat Hadar, Amir Arnon, Guy Nizri, Gome Sheffer, Nina Hanegbi, Yael Navon, Yaniv Levy Paz, Dudu Arush

INPA: Yariv Malihi, Ben Rozenberg, Assaf Kaplan, Igal Miller, Mark Katz

Birdwatchers and wildlife specialists: Nelson Shevachman, Yotam Gendler, Guy Avraham

Shai Meiri's lab members

Uri Roll's lab members