

SERIES



HOW TO MANAGE CATS on SMALL ISLANDS?

Context & objectives

❖ ICO SOLUTIONS

ISLANDS, COASTS, OCEANS SOLUTIONS : IDENTIFY AND SHARE GOOD INITIATIVES AND PRACTICES ALL AROUND THE WORLD WITH OUR PARTNERS



FRENCH PUBLIC INSTITUTION : ACQUIRE PARCELS OF COASTLINE THREATENED BY URBANISATION OR DEGRADED IN ORDER TO TURN THEM INTO RESTORED, DEVELOPED AND WELCOMING SITES RESPECTING THE NATURAL BALANCE.



INTERNATIONAL NGO : PROMOTION AND ASSISTANCE IN THE MANAGEMENT OF MEDITERRANEAN ISLAND AREAS BY THE IMPLEMENTATION OF CONCRETE ACTIONS IN THE FIELD.



SMALL ISLANDS ORGANIZATION, INTERNATIONAL NGO : SUPPORTS SMALL ISLANDS OF LESS THAN 150 KM² TOWARDS THEIR SUSTAINABLE DEVELOPMENT AND THE SUSTAINABLE MANAGEMENT OF THEIR RESOURCES (WATER & SANITATION, WASTE, ENERGY, BIODIVERSITY, LANDSCAPE AND CULTURAL HERITAGE).

Context & objectives

❖ **SERIES « CAT MANAGEMENT ON SMALL ISLANDS »**

SHARE CONCRETE PRACTICES TO SUPPORT THEIR REPLICATION WITH EXPERIENCES FROM PROJECT/PROGRAM MANAGERS AND EXPERTS IN THE FIELD.

HOW TO IMPLEMENT THEM? WHAT ARE THE DIFFICULTIES AND HOW TO PREVENT AND OVERCOME THEM ?
WHAT ARE THE KEYS TO SUCCESS?

HOW TO MANAGE **CATS** on **SMALL ISLANDS?**

- **Today** >> 1ST EPISODE : PREVENTING THE INTRODUCTION OF CATS ON SMALL ISLANDS AND IDENTIFYING WHICH ACTION STRATEGY TO IMPLEMENT
- **April 18th (4:00 PM – UTC+2)** >> 2ND EPISODE : SOFT TECHNICS TO LIMIT AND CONTROL CATS POPULATIONS
- **April 25th (4:00 PM – UTC+2)** >> 3RD EPISODE : ERADICATION AS LAST RESORT AND THE QUESTIONS AROUND IT.

Organizing team



Fabrice Bernard
Moderator

EUROPE & INTERNATIONAL
HEAD-OFFICER
CONSERVATOIRE DU LITTORAL



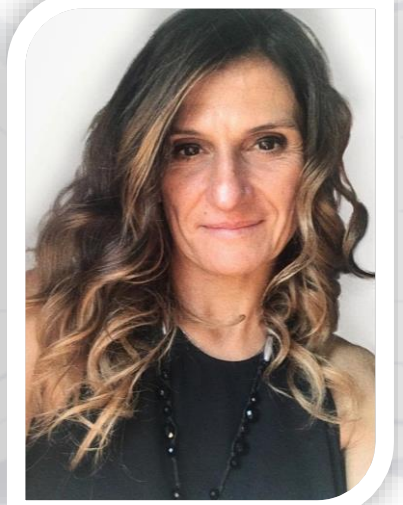
Cyrielle Grouard
**Organization /
Question Box**

PROJECT MANAGER
PIM INITIATIVE



Enora Tregouët
**Organization /
Back Office**

EUROPE & INTERNATIONAL
PROJECT OFFICER
CONSERVATOIRE DU LITTORAL

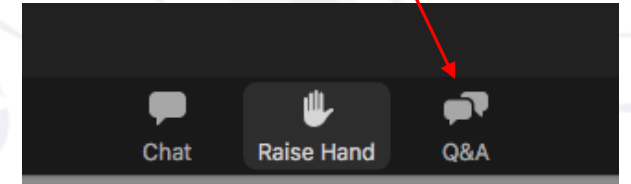


**Isabella
RANIERI**
Intepreter

How to use the platform

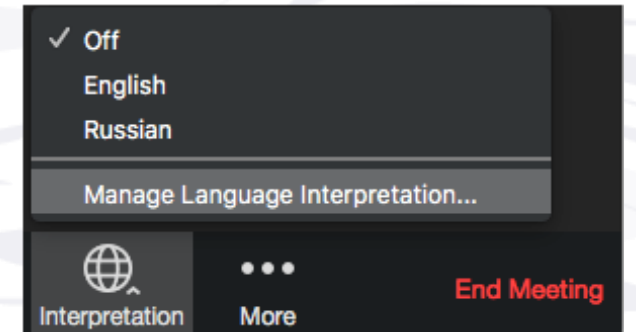
❖ PARTICIPANTS

YOU CAN ASK QUESTIONS THROUGH THE « QUESTION BOX ». THE MODERATORS SEE THEM AND RELAY THEM TO THE SPEAKERS WHO WILL ANSWER THEM IN THE "QUESTION AND ANSWER" SESSIONS PROVIDED



❖ TRANSLATION

IF YOU NEED INTERPRETATION IN FRENCH, PLEASE CHOOSE THE CHANNEL BELOW...



❖ SPEAKERS

DON'T FORGET THAT EVERYONE CAN SEE AND HEAR YOU...AND THAT YOU ARE BEING RECORDED FOR FUTURE BROADCASTS! PLEASE TURN OFF YOUR MICROPHONES WHEN YOU ARE NOT SPEAKING.

Program – Episode 1

Preventing the introduction of cats on small islands and identifying which strategy to implement

❖ **Introduction** - 5'

❖ **Part I : How to prevent cat arrival on islands** – 10' - ELSA BONNAUD

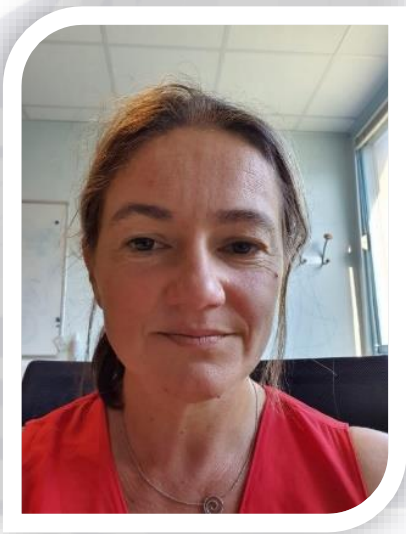
○ **Q&A** 10'-15'

❖ **Part II : How to chose your strategy** – 10' - ELIZABETH BELL

○ **Q&A** 10'-15'

❖ **Closing**

Speakers



Elsa Bonnaud

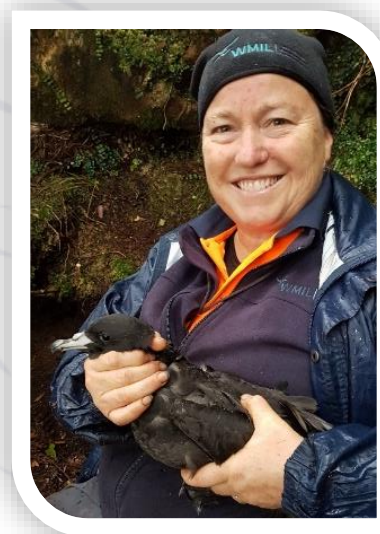
LECTURER
BOARD MEMBER OF PIM INITIATIVE

université
PARIS-SACLAY



INTERNATIONAL NGO FOR
**MEDITERRANEAN
SMALL ISLANDS**

FRANCE



Elizabeth (Biz) Bell

MANAGING DIRECTOR



WMIL | Wildlife
Management
International

NEW ZEALAND



Who I am?



Elizabeth (Biz) Bell
Managing Director



WMIL | Wildlife
Management
International



New Zealand



Who I am?

université
PARIS-SACLAY



I'm an **Assistant Professor** at **Paris Saclay University** since 2011.
I obtained a PhD in **Ecology and population dynamics**.

I'm currently working on the **impact of predators** both on **insular ecosystems** and **peri-urban areas** to understand how global changes can induce disturbances in **predator-prey interactions**.

I have co-supervised **3 post-doc**, **4 PhD students**.

I am **responsible of 3 teaching units**

I'm a **Scientific Expert** for the **national Park of Port-Cros & the Small Mediterranean Island International Initiative (PIM Initiative)**.

Introduction

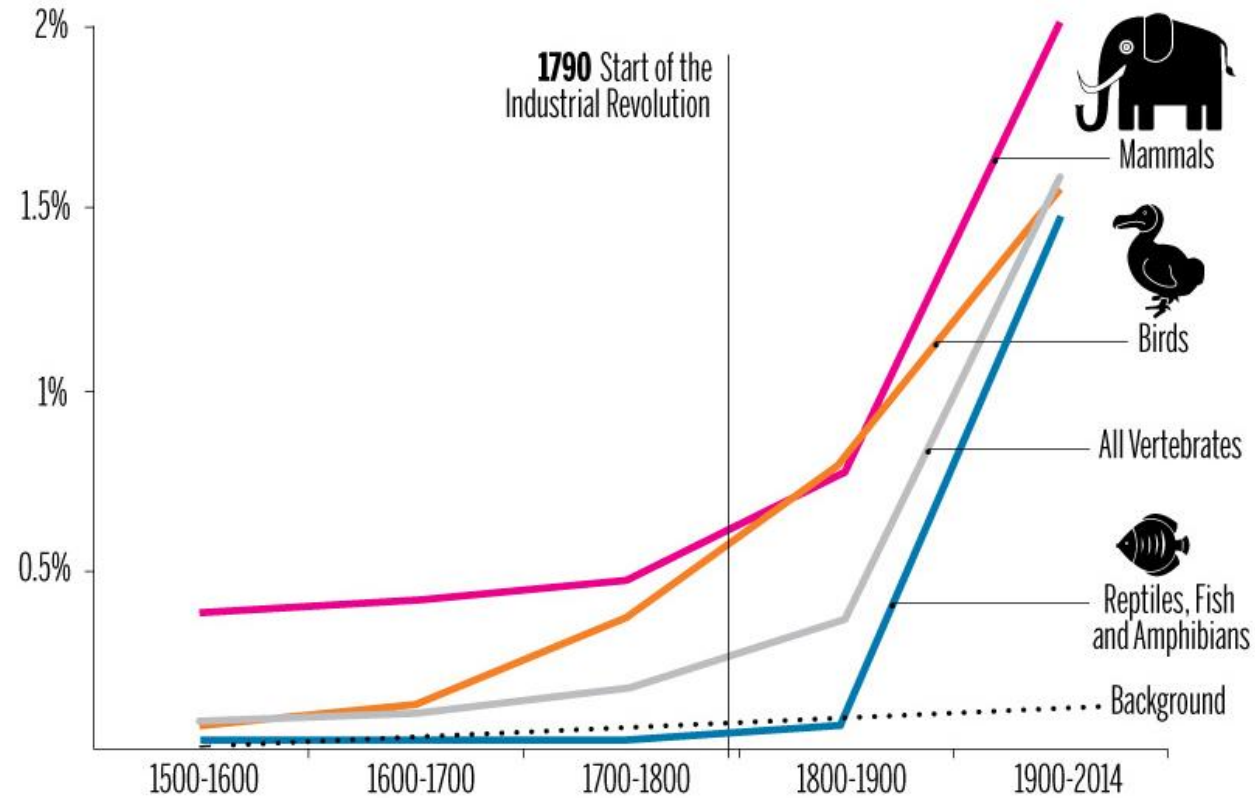
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*Why it's necessary to
manage cats on islands ?*

Introduction

➤ Global species extinctions worldwide



SOURCE: CEballos et al. Sci. Adv. 2015;1:e1400253 | GRAPHIC: Amanda Shendruk

MACLEAN'S

Introduction

➤ Species extinctions have more frequently occurred on islands than in other regions

80%
EXTINCTIONS



95%
BIRDS



54%
AMPHIBIANS



54%
MAMMALS



81%
REPTILES

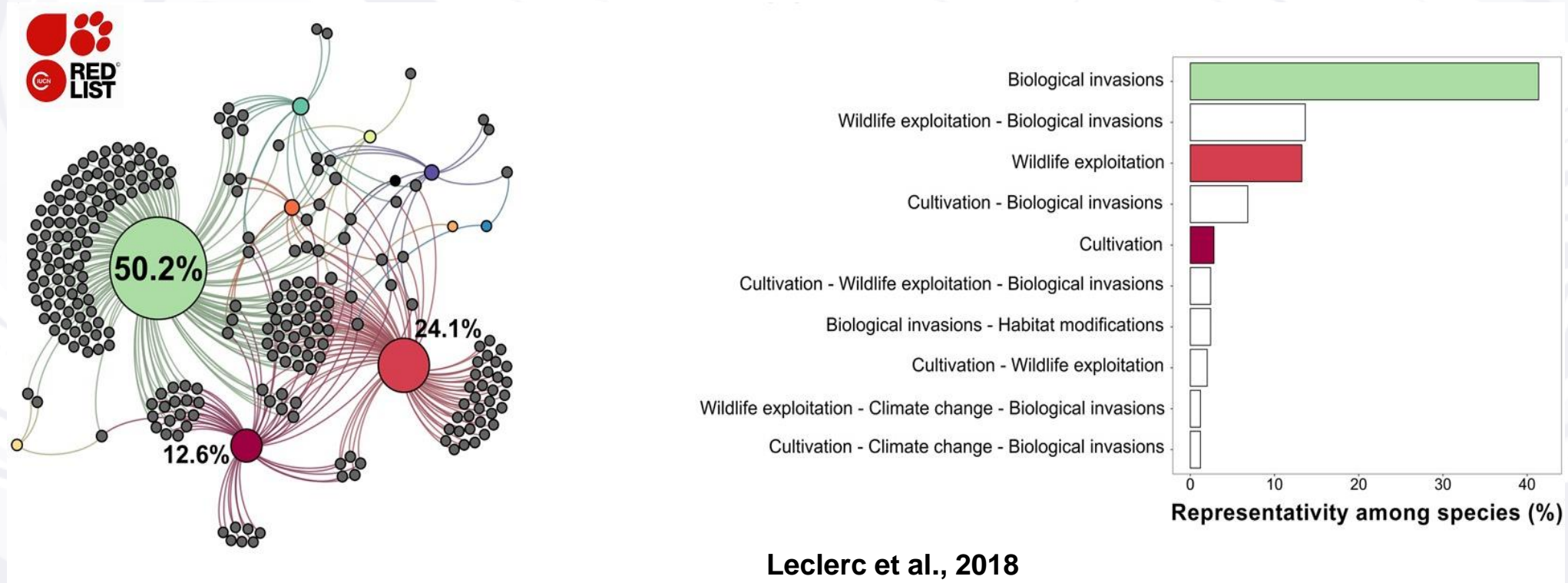


- ❖ Simplified trophic webs
- ❖ Naive species (evolution without mammalian predator)
- ❖ Vacant niches
- ❖ High number of endemic species

<https://www.islandconservation.org/the-importance-of-islands/>

Introduction

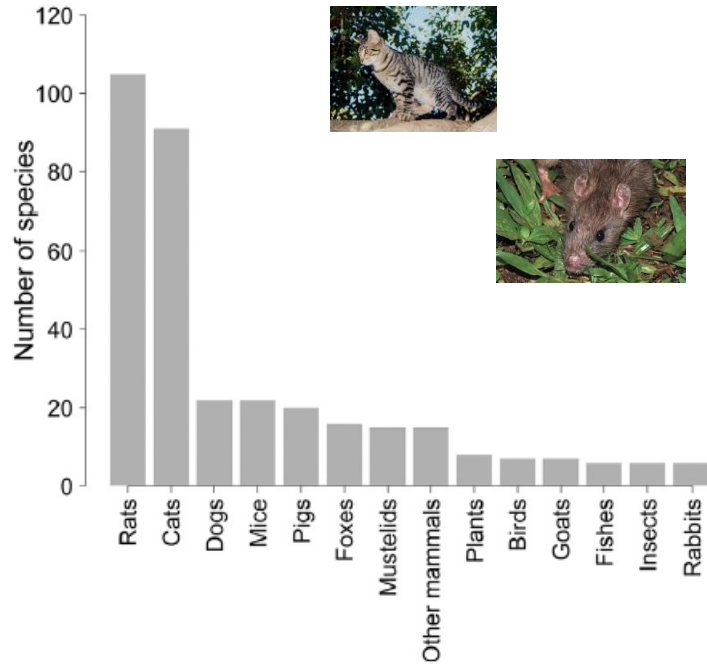
- Regarding extincted island species: invasive species are the main cause of species extirpation



Leclerc et al., 2018

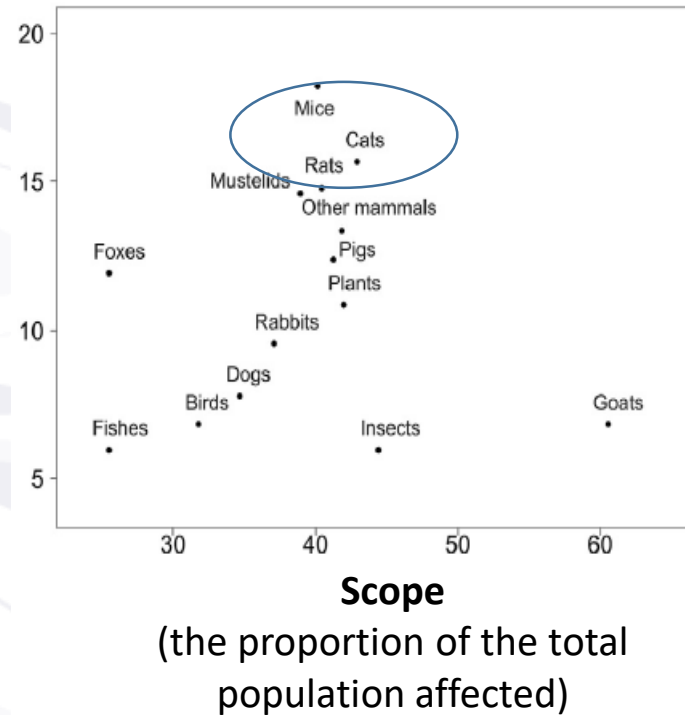
Introduction

➤ Mammal species as main invasive threatening seabirds



Dias et al. 2019

severity
(the rate of population decline caused by the threat)



As non historically present on islands no co-evolution process with native island species

Introduction

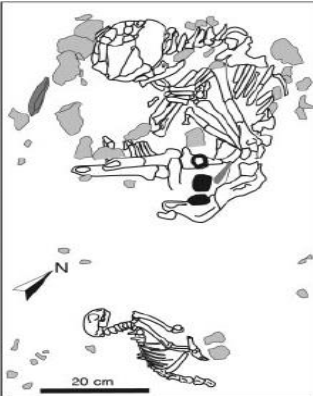
Domestic cat
(*Felis silvestris catus*) :



one of the predator the most spread on islands worldwide

➡ **Domesticated very early**

Early Taming of the Cat in Cyprus



Most ancient evidence of domestication and insular introduction :
9500-9200 years B.P.

J.-D. Vigne,^{1*} J. Guilaine,^{2,3} K. Debué,¹ L. Haye,² P. Gérard^{2,3} Science, 2004

➡ **Great ability to catch rodents**



Introduction

- Cats (invasive mammal predators) not only a seabird extinction issue!



Leiocephalus eremitus



Geocapromys thoracatus



Porzana sandwichensis

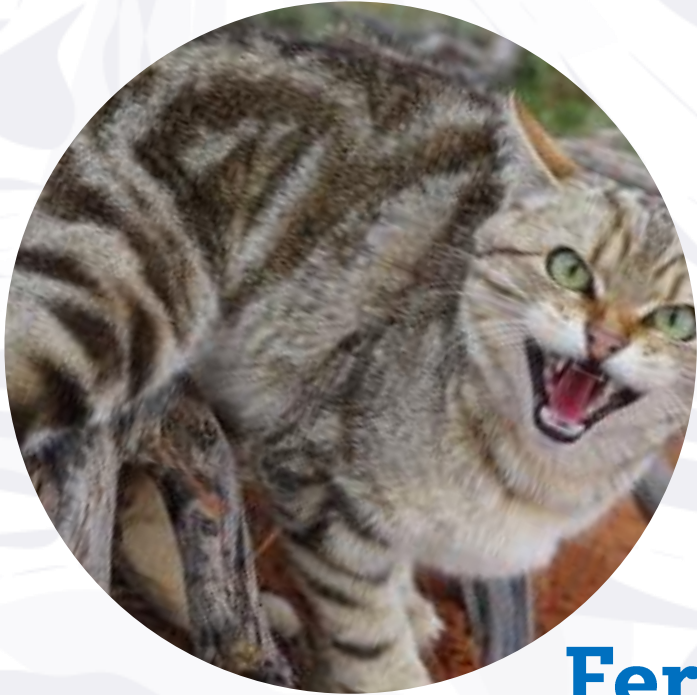


Caracara lutosa



Zenaida graysoni

CATegories



Feral Cat



Stray Cat



Pet (Domestic) Cat

Part I :

How to prevent cat arrival on islands

Part I :

- TO INFORM specifically on cat impact on islands! => species extinct and threatened

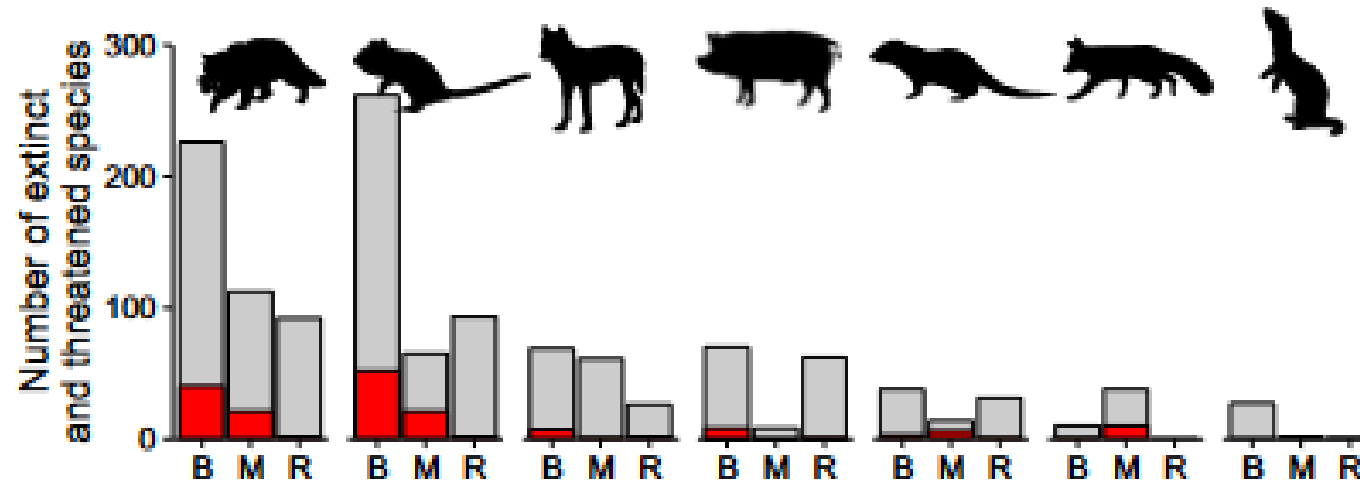
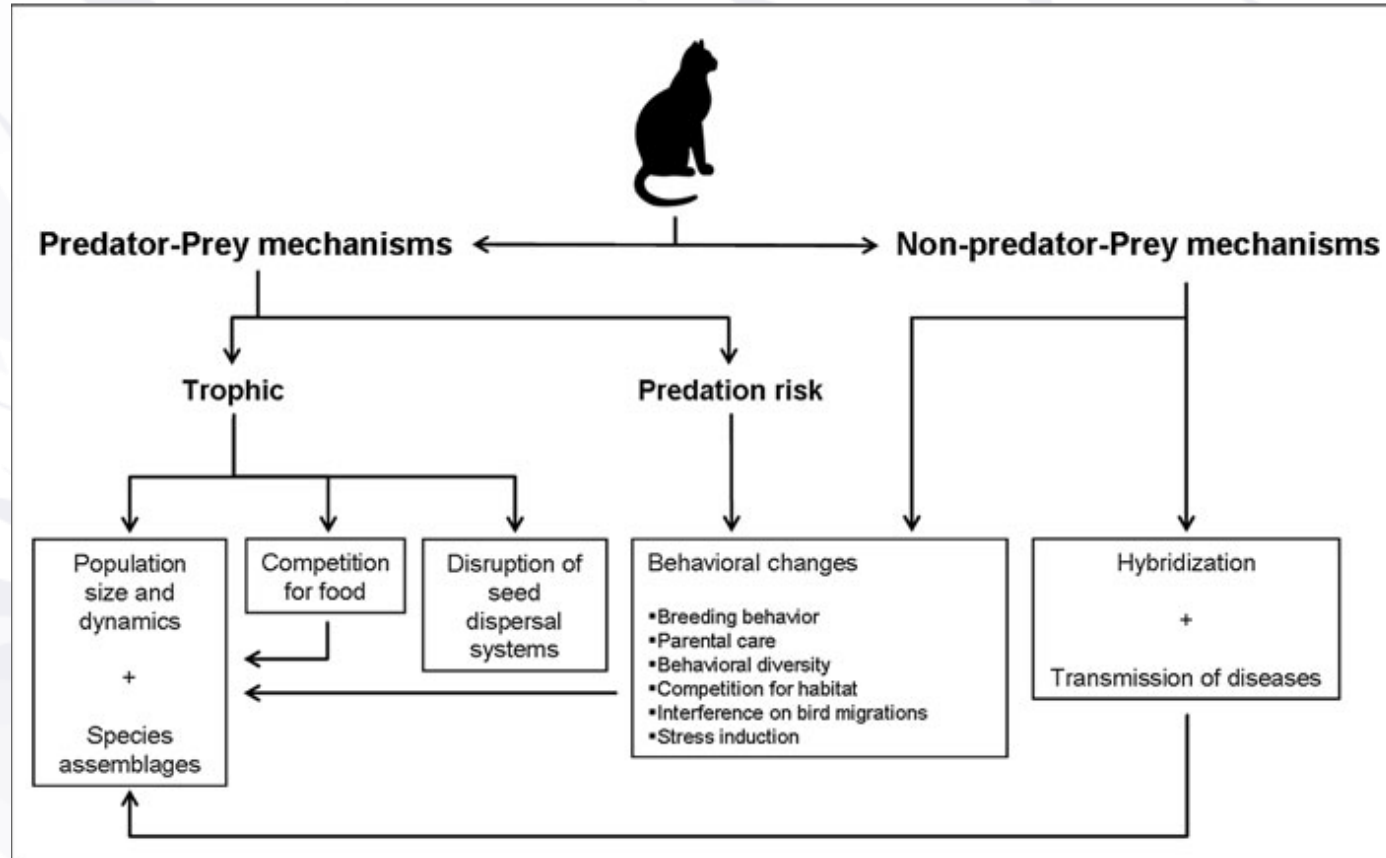


Fig. 2. Numbers of threatened and extinct bird (B), mammal (M), and reptile (R) species negatively affected by invasive mammalian predators. Gray bars are the total number of extinct and threatened species, and red bars are extinct species (including those classed as extinct in the wild). Predators affecting <15 species are not shown here. Predators (L to R) are the cat, rodents, dog, pig, small Indian mongoose, red fox, and stoat.

Part I :

➤ TO INFORM specifically on cat impact on islands! => not only a matter of direct predation



biggest lizards are more easily preyed upon by cats, => low dispersal of bigger seeds.



population dynamics of seabirds in limiting or preventing their settlement

Medina et al. 2014

Part I :

➤ TO INFORM specifically on cat impact on islands! => Why its impact is so detrimental ?

Due to its biological and ecological characteristics!

- ❖ Strong capacity of dispersion and adaptation
- ❖ Multi-partner reproduction and high fecundity
- ❖ Efficient predator hunting independently of hunger
- ❖ Prey upon a large range of vertebrate and invertebrate species (generalist predator)

High success for establishing new and numerous cat populations



As non historically present on islands no co-evolution process with native island species



Part I :

➤ TO TURN OF THE FAUCET rather than mop up the leak :

- ❖ No new domestic cat not neutered !!!!!
- ❖ Sterilisation of domestic cats
- ❖ Removal of feral cats (cage trapping? hunting?)



Part I :

➤ TO PROMOTE neutered domestic cats



BOULE



MINNIE



NIKITA



GRILLOU



CARAMEL



FRIMOUSSE



MIKIE



GRISOU



CALINE

SERIES



INTRO / PART I

Question & Answers

Part II :

How to choose your strategy

How to address the situation of cats on inhabited islands



Elizabeth (Biz) Bell
Managing Director



New Zealand



Preparation phases towards eradication



ISLAND CHARACTERISTICS: Terrain, weather, inhabitants, visitors, target and non-target species, complete trials (tools, etc.), baseline monitoring, etc.

ISLAND COMMUNITY: Size, Number of Settlements, Housing types, Number of Farms, Businesses & Industries, Fishers, etc.



PET (DOMESTIC) CATS: Quantifying the numbers of cats, Presence of stray cats, Testing microchipped, spay/neuter, etc.

Preparation phases towards eradication



ASSESSING POSSIBLE TECHNIQUES:

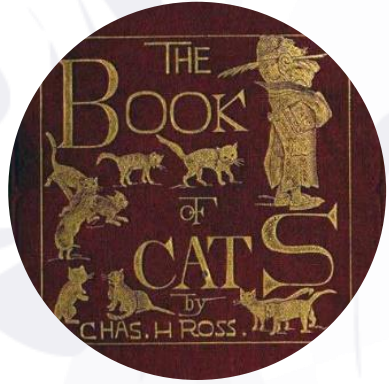
Eradication: Traps (live/kill), shooting, toxins, viral disease, hunting, etc.

Monitoring: Cameras, detection dogs, etc.

LEGISLATION: Licences (methodology), Approvals & Permits, Risk Assessment, Health & Safety, etc.

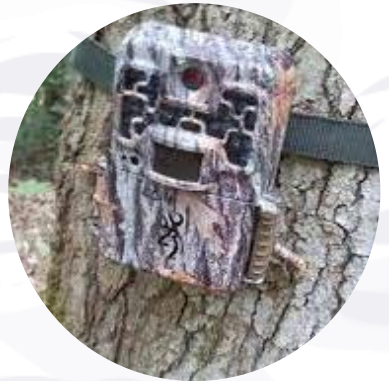


Cat consultation with community



CATalogue of pet (and stray) cats

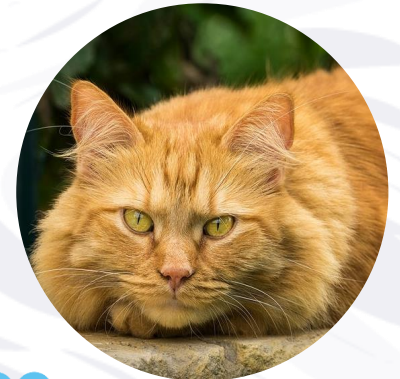
GPS tracking of pet cats to determine risk



Assessing the number and range of feral cats

Responsible ownership of Pet Cats

Diet, play, collars, keep indoors, neuter & chip



Options towards cat eradication



TRAP NEUTER RETURN (RELEASE OR REHOME)

- Ecological implications
- Welfare implications
- Disease implications
- Property destruction implications

Options towards cat eradication

LIVE TRAPS:

- Range of options (e.g., cage, leg hold, etc.)
- Econode options (i.e., auto-reporting of captures)
- Euthanasia method required (e.g., shooting, lethal injection)
- Legal implications
- Welfare implications



Options towards cat eradication

LETHAL METHODS:

Kill traps (range of options)

- Including Econode options (auto-reporting)

Toxin

Secondary poisoning

Hunting (with man-teams, dogs, etc.)

Viral disease

- Legal implications
- Welfare implications



Expert's summary



Detailed assessment of island and species present



Engage with community and address concerns regarding pet cats



Identify and agree to eradication methodology (including euthanasia)



Legal approvals obtained



Undertake eradication operation



Monitoring recovery of island ecosystem



Biosecurity

SERIES



PART II

Question & Answers

SERIES



Last Questions ?

Thank you for your attention!
See you soon for the next episodes

CONTACT US : icosolutions@conservatoire-du-littoral.fr

ICO SOLUTIONS CALENDAR : www.ico-solutions.eu





NEXT | HOW TO MANAGE **CATS** on WORKSHOPS | **SMALL ISLANDS?**

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See you soon for the next episodes

