

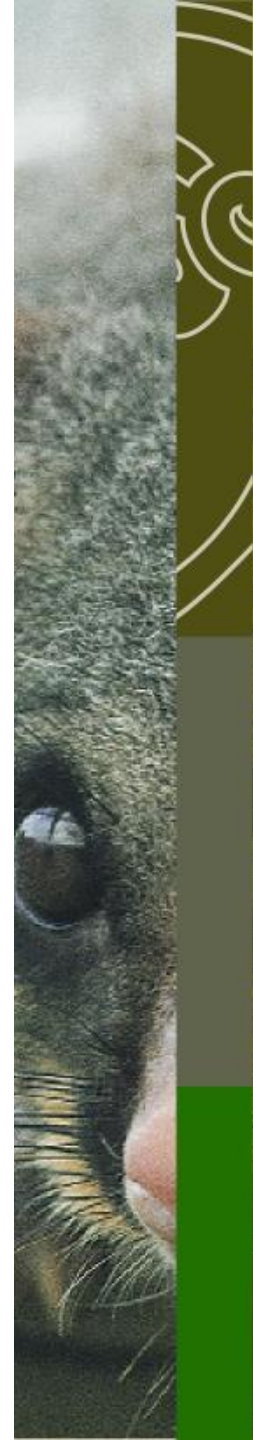


Landcare Research
Manaaki Whenua

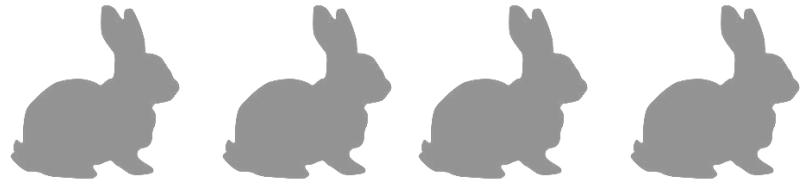
Rabbit baiting & non-target risk:

What do we know?

Penny Fisher



They're baaack....



Increasing RHD immunity / survival in NZ rabbit populations = increasing impacts

Renewed need for application of conventional rabbit control tools:

- *shooting*
- *warren fumigation / destruction*
- *baiting – aerial & ground application*

Toxic baits for rabbit control

Pindone



Pellet, oat or carrot bait

Anticoagulant

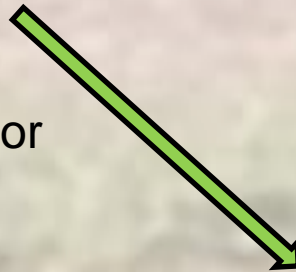
Delayed onset & slow acting toxicity (days)

Consecutive daily feeds enhance toxicity



Carrot bait most commonly used – aerial or ground broadcast

1080

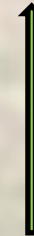


Metabolic energy inhibitor

Faster acting (hours)

Lethal exposure in single feed

Chopped carrot, pellet, oat or paste bait



More rabbit baiting – non-target risks?

- Aerial 1080 associated with risk to non-target wildlife
 - *does this apply to rabbit baiting too?*
 - *lower toxic concentrations in rabbit bait but higher application rates*
 - *different habitats in rabbit control = different non-targets present*
- Are there lower risks with pindone, or just a lower perception / profile?

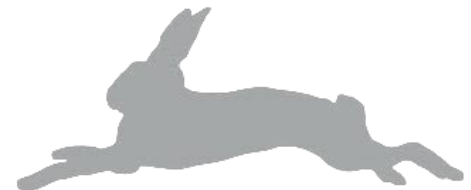
Let's do a review.....



Review* of non-target risk



- Research (toxicity) and operational information compiled - literature review & database searches
- ▲
- Primary & secondary non-target risks ranked (from low to very high) for range of species
- ▲



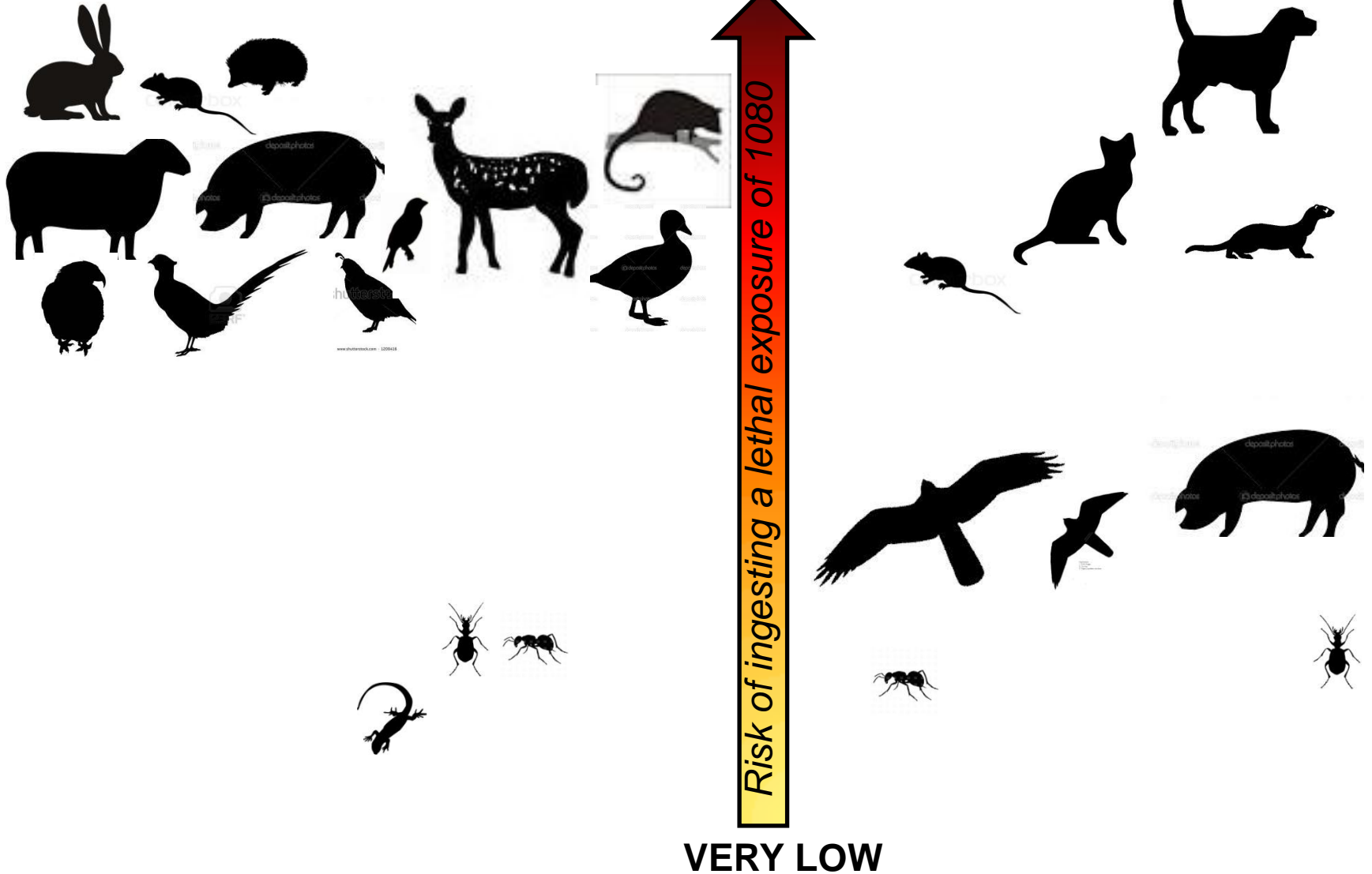
** Supported by Marlborough District Council - Envirolink Advice Grant MLDC82*

Eating 1080 carrot bait
(primary risk)

1080 risk rankings

VERY HIGH

Eating 1080-poisoned rabbits
(secondary risk)

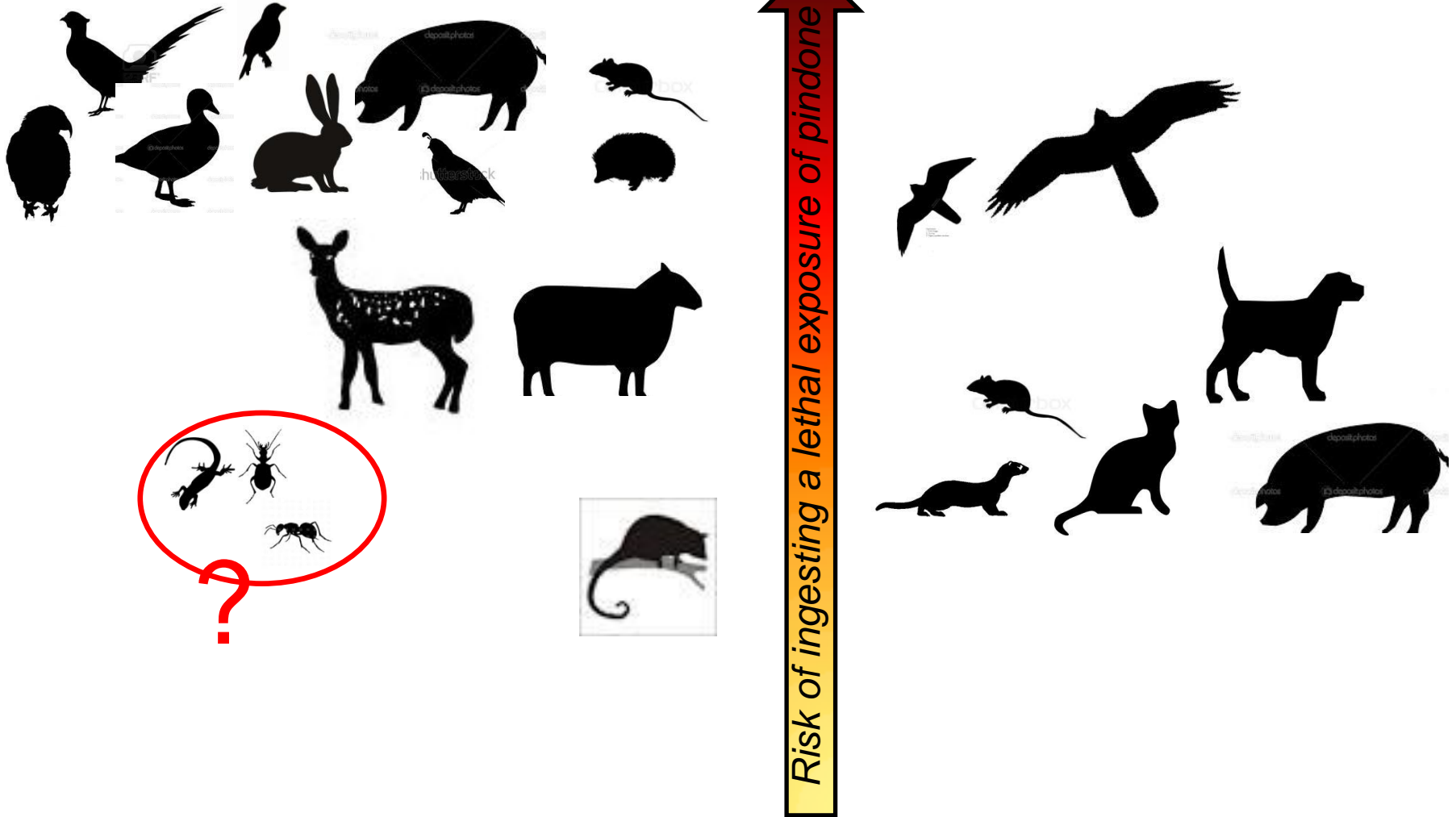


Eating carrot bait over 4-7 days (primary risk)

Pindone risk rankings

VERY HIGH

Eating pindone-poisoned rabbits over 4-7 days (secondary risk)

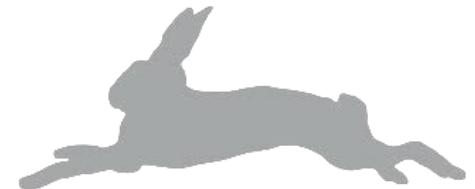


VERY LOW

Review findings



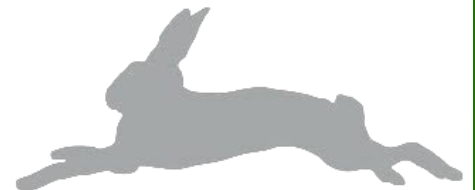
- Much more information available for 1080 than pindone (significant information gap)
▲
- Relatively little (or no) field-based evidence or investigation of n-t effects for 1080 or pindone in rabbit control
▲
- Carrot bait quality eg. proportion of chaff and toxic concentrations, will affect both efficacy in rabbit control & primary non-target risk
▲



Review recommendations



- Theoretical estimates of non-target risk need to be field-proofed
 - *What are the comparative annual uses of 1080 and pindone for rabbit control?*
 - *How much chaff is being produced by current bait prep practices? How toxic is it?*
 - *How quickly are toxic baits removed after application? By which animals?*
 - *How available are poisoned rabbits to scavengers & how quickly do carcasses degrade?*



Summary



- As usual – more questions than answers!
- If aerial rabbit baiting is going to become more common and broadscale, managers need robust information to address questions about non-target effects

