Charity Social and NATURAL PROJECT

Australian Raptors Conservation

A mutualism story between human society and birds of prey

Can conservation become useful infrastructure for society?

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30 MINUTES

Today's route: from fear to partnership

Why raptors matter

Threats we create

Raptors as rodent-control allies

Conservation proposal + Q&A

> **Instead of treating raptors as scenery, pests, or symbols, we can treat them as ecological partners.**

Structure designed for a 30-minute class/seminar talk

BIG IDEA

Mutualism - but at the society level

Conceptual framing: mutual benefits between human systems and raptor populations

Who are Australian raptors?

Australia is home to 36 species of raptors, and many face conservation pressure.

Diurnal hunters

Eagles, hawks, kites and falcons hunt by day. Many use soaring, hovering or perch-hunting.

Nocturnal hunters

Owls hunt mostly at night. Barn owls specialise in hearing faint movements on the ground.

Scavengers

Large raptors also remove carcasses, reducing waste and disease risk in landscapes.

Indicators

Top predators reveal whether ecosystems are functioning - prey, habitat and toxins all show up in raptor health.

Conservation status varies by species and jurisdiction, so use current local lists before making management decisions.

Sources: WIRES; Australian Museum species profiles

The benefits people receive

Rodent suppression

Owls, kites and kestrels hunt mice and rats - a direct benefit to farms, stores and peri-urban areas.

Lower poison dependence

Raptor-friendly pest management can reduce the need for high-risk rodenticides when paired with sanitation and exclusion.

Cleaner landscapes

Large raptors scavenge carrion, helping recycle nutrients and remove carcasses.

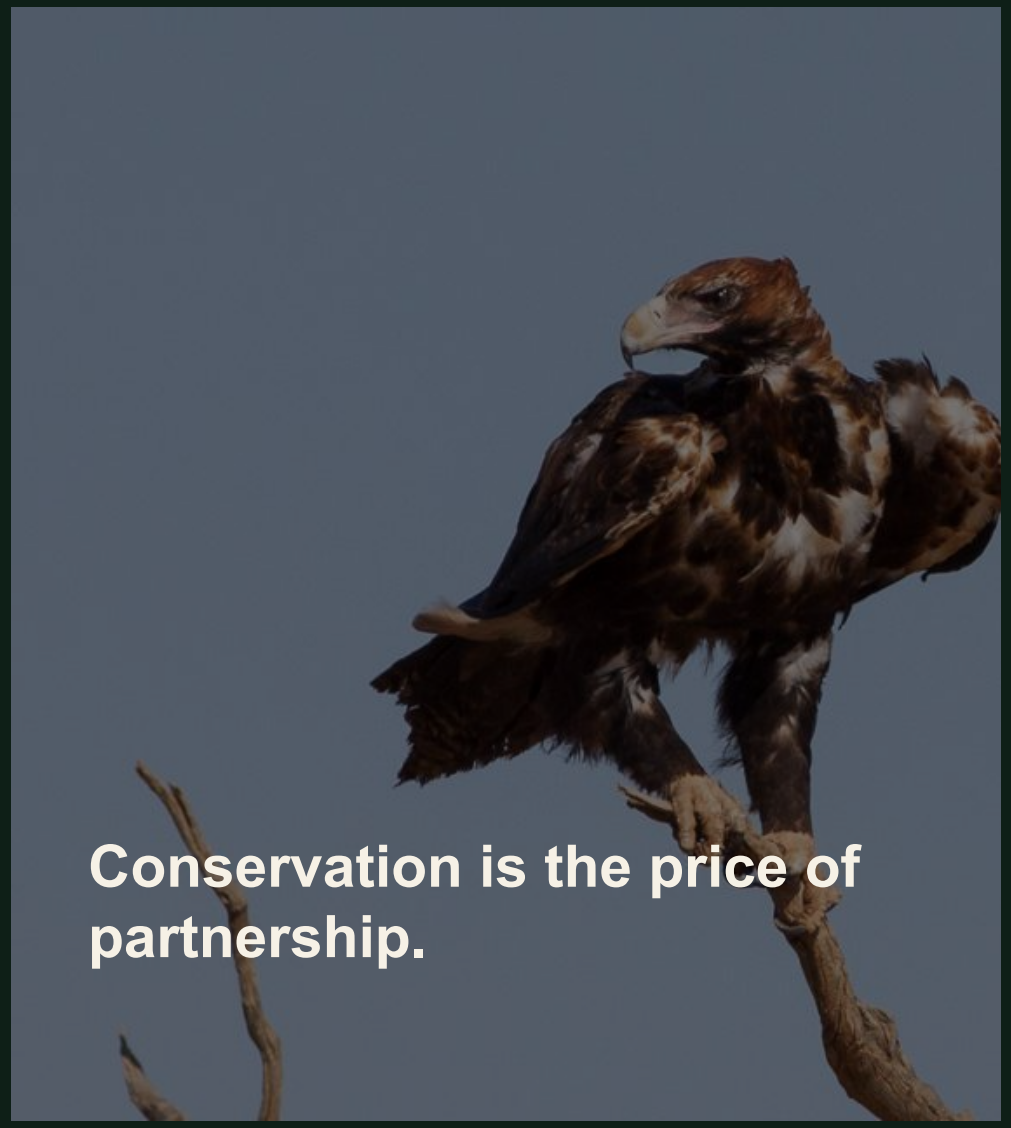
Education and identity

Raptors are powerful symbols for citizen science, school programs and nature tourism.

Sources: Australian Museum species profiles; pest-control literature

PROBLEM

The threats are mostly human-made



Habitat loss

fewer old trees, hollows and safe roosts

Secondary poisoning

raptors eat poisoned rodents and accumulate toxins

Infrastructure

collisions and electrocutions on roads and powerlines

Human conflict

persecution, disturbance and weak public awareness

Sources: BirdLife Australia; APVMA; raptor conservation literature

Case study 1: Black-shouldered Kite

Black-shouldered Kite

Why it fits the mutualism story

The Australian Museum describes this kite as feeding mainly on rodents, especially the introduced House Mouse, and often following mouse plagues in agricultural areas.

Hunting style

Day-active; often hovers with wings raised in a V-shape, then drops quickly onto prey.

Conservation link

Open farmland can help the species, but poisoned prey and unsafe infrastructure can turn useful habitat into a trap.

Source: Australian Museum, Black-shouldered Kite profile

Case study 2: Eastern Barn Owl

The nocturnal partner

Barn owls hunt when human activity is low and rodents are active.

Diet

Australian Museum: mostly small mammals, rats and mice, plus birds, insects, frogs and lizards.

Superpower

Exceptional hearing helps them locate prey even in darkness.

Design implication

Nest boxes can help only where food, safe hunting habitat and low poison exposure already exist.

Sources: Australian Museum Barn Owl and Eastern Barn Owl profiles; Bontzorlos et al. 2024

Case study 3: Nankeen Kestrel

Flexible hunter

Feeds on small mammals, reptiles, small birds and insects; prey is found from a perch or by hovering.

Practical idea

Artificial perches can make open crops easier to scan and hunt.

Australian evidence

A NSW soybean study found artificial perches increased diurnal raptor visiting and hunting over treated crops.

Sources: Australian Museum Nankeen Kestrel profile; Kay et al. 1994

Raptor-friendly rodent control: the logic

1. Reduce rodent food	grain hygiene, bins, storage, weeds
2. Block access	seal buildings and remove shelter
3. Reduce risky poison	avoid SGARs where possible; follow regulations
4. Support predators	nest boxes, safe perches, habitat corridors
5. Monitor outcomes	rodent signs, raptor breeding, non-target impacts

Raptors are not a replacement for sanitation. They are the living layer that makes low-poison control stronger.

Sources: APVMA; Bontzorlos et al. 2024; Labuschagne et al. 2016

SCIENTIFIC CAUTION

Evidence: promising, not magic

What the evidence supports

- Raptors can take large numbers of rodents when prey is available.
- Nest boxes can increase barn owl presence in suitable agricultural landscapes.
- Artificial perches can increase raptor visiting and hunting in open crops.

What it does not prove

- Raptors alone can prevent every mouse plague.
- More nest boxes always equals fewer rodents.
- Predator attraction has no side effects.
- A design from one country or crop transfers automatically to Australia.

How to stay credible

Use raptors as one layer in integrated pest management: sanitation, exclusion, low-risk control, predator support and monitoring.

The best pitch is modest: raptors help reduce pressure and poison dependence; they do not replace all control.

Sources: Bontzorlos et al. 2024; Labuschagne et al. 2016; Kay et al. 1994

Urban and peri-urban partnership

Nocturnal neighbours

Reduce poison, protect hollows and manage light/disturbance.

Large raptors

Protect from secondary poisoning, collisions and persecution.

Open-space hunters

Maintain grassland edges and safe hunting habitat.

Cities are not separate from raptor conservation - suburbs, parks, warehouses and councils all shape food webs.

Sources: BirdLife Australia; Australian Museum; urban wildlife conservation literature

CURRENT ISSUE

A policy window: rodenticide reform

SGARs

Second-generation anticoagulant rodenticides

poisoned rodent

Why it matters for raptors

SGARs persist in tissues and can move up the food web when raptors eat poisoned prey.

Australia in 2026

APVMA certified SGARs should be restricted chemical products and published a decision to suspend all SGAR products from 24 March 2026.

Conservation opportunity

Regulation creates momentum for councils, farms and households to shift toward safer, integrated pest management.

Sources: APVMA 2026; BirdLife Australia SGAR campaign

ACTION PLAN

Conservation actions that make mutualism work

Protect old trees and hollows

Owls and many raptors need safe roosting and nesting sites.

Use poison-smart pest control

Avoid SGARs where possible; prioritise exclusion, sanitation and trapping.

Retrofit dangerous infrastructure

Powerline design, road placement and fencing can reduce avoidable deaths.

Support rescue and reporting

Wildlife carers, citizen science and local monitoring reveal hidden threats.

Make it a community story

Schools, farms, councils and Indigenous/local knowledge holders can co-design practical conservation.

Sources: WIRES; BirdLife Australia; raptor rehabilitation/conservation guidance

Pilot project: Raptor-Friendly Rodent Control

Goal: test whether habitat support + low-poison IPM can reduce rodent pressure while improving raptor safety.

1

Baseline

Map rodents, current poison use, raptor sightings and nesting habitat.

2

Design

Choose safe perch/box sites; create poison-reduction protocol.

3

Implement

Install perches/boxes; train staff; improve grain and waste hygiene.

4

Monitor

Track rodent signs, raptor occupancy, breeding success and non-target impacts.

5

Adapt

Keep what works, remove what harms, share the results.

Recommended format: 3 treatment sites + 3 comparison sites over at least one breeding season.

Partners: landholders, pest-control professionals, ecologists, wildlife carers, local council, schools/citizen scientists.

EVALUATION

How success would be measured

Measure	What to track
Rodent pressure	tracking cards, chew marks, trap counts, grain damage
Raptor response	occupancy, breeding, hunting observations, camera data
Poison reduction	quantity/type of bait used, SGAR avoidance, compliance
Non-target safety	dead/injured wildlife reports, native small mammal risk
Human value	costs, crop/storage losses, staff attitudes, community participation

A conservation partnership is only credible when we measure both sides: human outcomes and raptor outcomes.

ETHICS

Risks and safeguards

Attracting birds into danger

Keep perches and boxes away from roads, unsafe powerlines and high-poison areas.

Non-target predation

Monitor native small mammals and avoid simple "more predators is always better" thinking.

Disease and pests in boxes

Inspect and clean boxes safely; follow wildlife-handling rules.

Human-wildlife conflict

Public education: do not feed raptors, harass nests or handle injured birds without trained help.

Sources: Bontzorlos et al. 2024; wildlife-care and raptor-conservation guidance

Conclusion: the mutualism deal

We protect raptors from the risks we create.

They help us build healthier, less toxic landscapes.

1

Raptors are ecosystem partners, not just wildlife symbols.

2

Rodent control by owls, kites and kestrels is promising when integrated with sanitation and low-poison practices.

3

The future is measured partnership: benefits for people and safer lives for birds.

Questions?

SOURCES

Key references

- WIRES. Raptors - Birds of Prey. Summary of Australian raptor diversity and conservation pressure.
- Australian Museum. Species profiles: Black-shouldered Kite; Barn Owl / Eastern Barn Owl; Nankeen Kestrel.
- BirdLife Australia. Protect Aussie birds from lethal SGAR rat poisons. Secondary poisoning risk and affected birds.
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- Bontzorlos et al. (2024). Barn Owls as a Nature-Based Solution for Pest Control. Environmental Sciences Proceedings.
- Labuschagne et al. (2016). Are avian predators effective biological control agents for rodent pest management? Biological Control.
- Kay, Twigg, Korn & Nicol (1994). The use of artificial perches to increase predation on house mice by raptors. Wildlife Research.
- HawkWatch International & Raptor Research Foundation. Raptors and overhead electrical systems conservation letter.

Use the latest local threatened-species and chemical-use rules before implementing a real project.

LICENSES

Image credits

Eastern Barn Owl

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Black-shouldered Kite

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Nankeen Kestrel

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Wedge-tailed Eagle

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