

**Distribution of forest owls
throughout Cape Otway and
human induced edge effects**



Background

- Habitat Fragmentation a major issue for the last 200 years in Australia.
- Major characteristic being edge effects.
- This study will focus on human induced edges (farmland).
- Edges have varied effects on abiotic and biotic aspects of landscapes.
- Some knowledge of edge effects upon raptors, very little on owls.
- Owls are major concern due to their specific habitat requirements.



Species of the Otways

- Southern Boobook Owl, *Ninox novaeseelandiae*
- Barn Owl, *Tyto alba*
- **Advisory List of Threatened Vertebrate Fauna(2003)**
- Powerful Owl, *Ninox strenua*
- Barking Owl, *Ninox connivens*
- Masked Owl, *Tyto novaehollandiae*
- Sooty Owl, *Tyto tenebricosa*????



Aims

- To identify the owl species present on Cape Otway.
- Identify the habitat preferences of individual owl species.
- To observe human induced edge effects upon owl species, if any.
- To understand the underlying reasons behind any observed trends.



Site Selection

- Three habitat types, Shrubby Foothills Forest, Coastal Heath, Wet Forest/Cool Temperate Rainforest.
- At least ten sites at each habitat type.
- At least ten sites at the edge of Shrubby Foothills Forest.
- Sites selection limited by access via roads through winter. And distance apart, at least one km, preferable 3km.



Shrubby Foothills Forest (sclerophyll woodlands)

- Predominantly manna gum, messmate and brown stringybark.
- Understorey, coast wattle, coast banksia, drooping she-oaks and boobyalla.

Damp Sands Herb Rich Woodland (Coastal Heath)

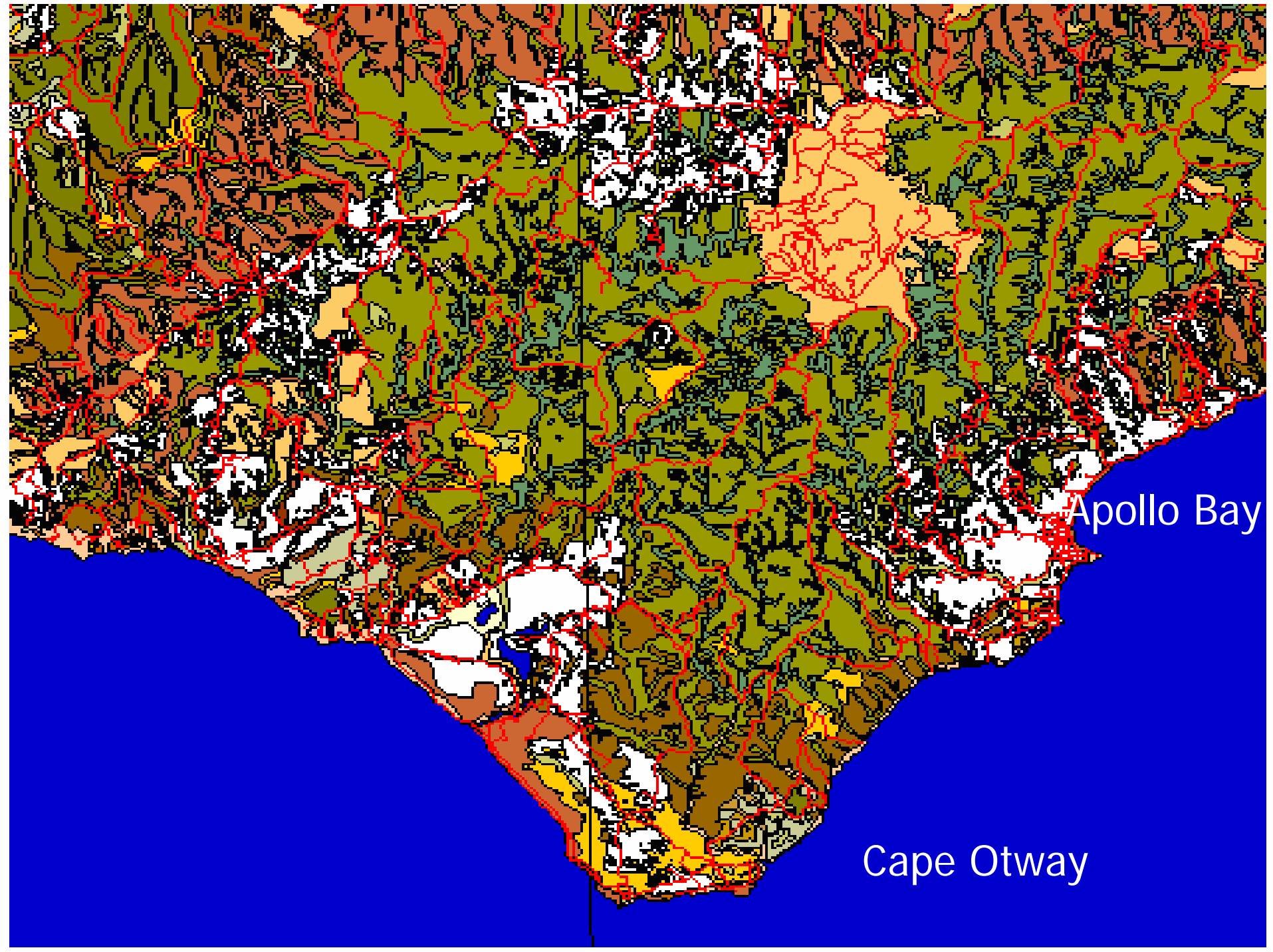
- Open canopy of stunted manna gums and coast banksia.
- Very dense understorey of coast beard heath, coast wattle, bursaria and she-oaks.



Wet Forest/ Cool Temperate Rainforest

- Wet forest at higher elevations, contains pockets of rainforest.
- Dominated by manna gum, mountain grey gum, messmate, scattered blue gums, Mountain ash higher up toward Otway ridge.
- Understorey often dominated by giant tree ferns.
- Rainforest characteristically contains Myrtle Beach and Blackwoods.





Apollo Bay

Cape Otway

Methods

- Initial Quiet Listening, five minute period

Call Playback, 120 % natural Volume

- Powerful call 2 min, listening period 2 min
- Boobook call 2 min, listening period 2 min
- Barking call 2 min, listening period 2 min
- Sooty 2 min, listening period 2 min
- Barn call/2 min, listening period 2 min
- Masked five shrieks/2 min



Methods

- Spotlighting, 5 minute session.
- Vegetation Survey.



Hypothesis

- Powerful owls would be unlikely in coastal heath.
- Barking owls likely within the open woodlands.
- If the Sooty owl is observed would be most likely in rainforest.
- **Edge effects**
- The Boobook, possible association due to foraging.
- Masked and Barking Owls ease of predation at edge.
- Barn owls possibly higher densities at disturbances interface.
- Powerful Owls and Sooty Owls disadvantaged due to lack of large trees and prey.

