

# Who's watching whom?

A group of gazelles, likely topis, are gathered in a lush, green savanna environment. The gazelles have reddish-brown coats and are looking towards the camera with various expressions. The background is filled with dense green foliage and trees, creating a natural, wild setting. The lighting is bright, suggesting a sunny day.

Research on minimising disturbance by  
the wildlife tourist in animal encounters

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# Measuring disturbance



- Disturbance is inevitable but is fitness compromised?
- Use of proxies, such as:
  - elevated metabolism such as heart rate and exercise,
  - increased vigilance traded off with foraging and maintenance activities



# Minimising disturbance



1. Habituation: consistent and frequently repeated observer behaviour acceptable to subjects



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3. Fostering: hand-reared subjects back in the wild
4. Corralling the observers
5. Discretion: masking the observers' presence

# Research design

A large African elephant is the central focus of the image, standing in a savanna landscape. The elephant's trunk is submerged in a mud puddle, and its large ears are spread out. The background consists of green grass and trees under a bright sky. The text 'Research design' is overlaid at the top in a large, bold, black font.

- Observe the behaviour of and canvas the needs of visitors (wildlife tourists) and tour operators
- Implement results into your wildlife study design
- Test for reactions of wildlife
- Give recommendations on best-practice behaviour that accounts for wildlife and visitor needs



# Research: Minimum distance of approach to wildlife

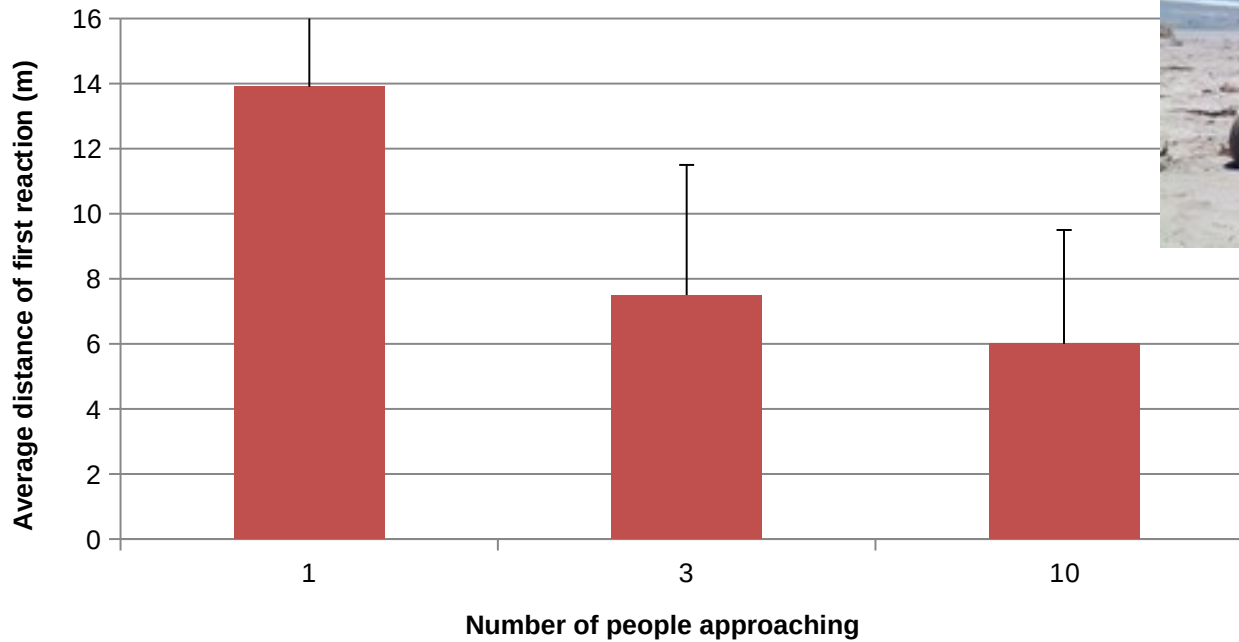
Australian Sea lions on Kangaroo Island



Lovasz, T., Croft, D.B. and Banks, P. (2008). Establishing tourism guidelines for viewing Australian Sea Lions *Neophoca cinerea* at Seal Bay Conservation Park, South Australia. In, Lunney, D., Munn, A. and Meikle, W. (eds.), 'Too Close for Comfort: Contentious issues in human-wildlife encounters', Pp. 225-232. (Royal Zoological Society of New South Wales, Mosman).

# Habituation: Sea lions

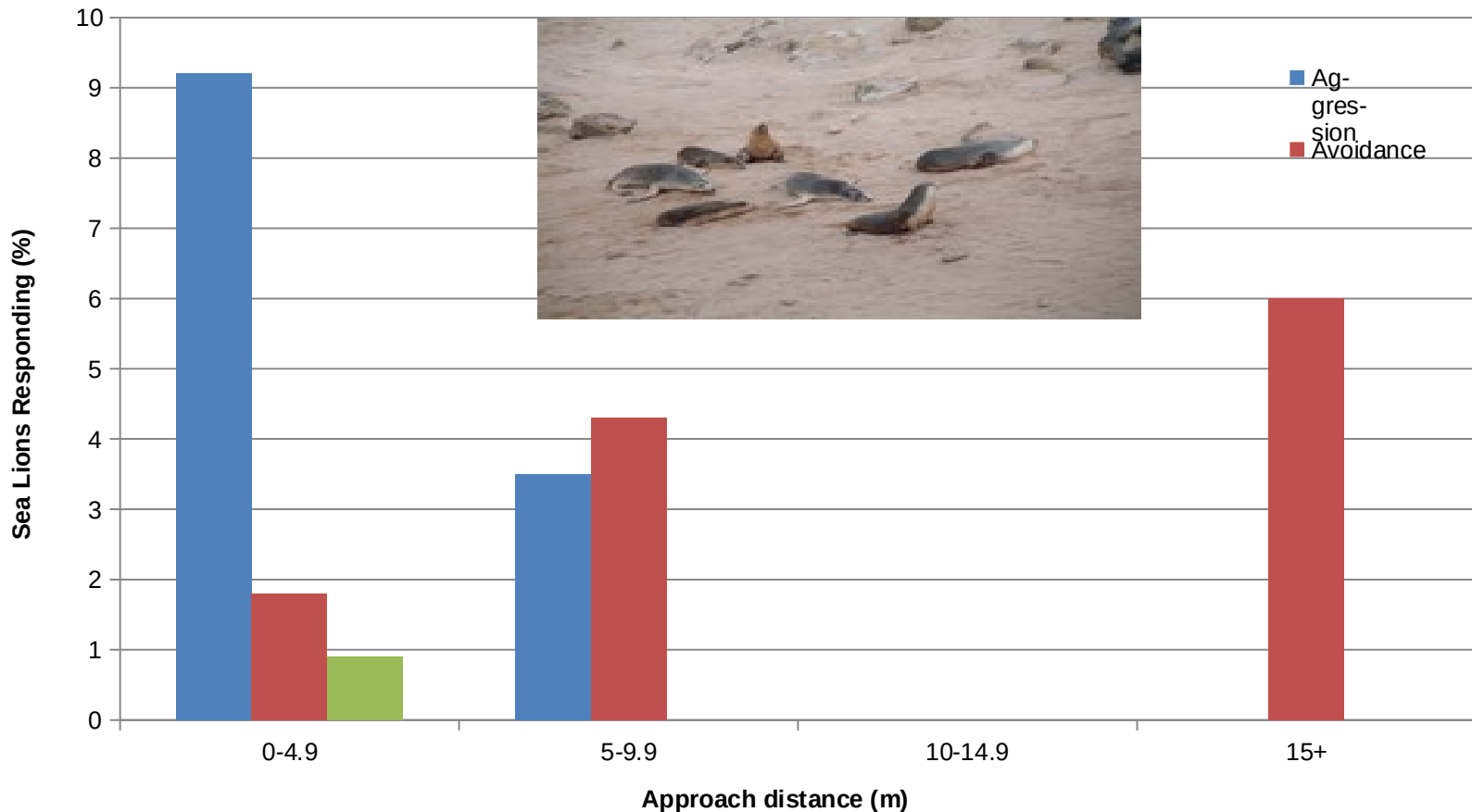
1. Lesser reaction to typical groups of people encountered than an individual



2. Tourist beach – 28% react to approach to 6 m
3. Other nearby beaches – 51% react to approach to 6m

# Management: Sea lions

Minimum approach distance of 6 m set arbitrarily on 'experience'  
Research suggests 10 m is more appropriate



# Research: Minimum distance of approach to wildlife

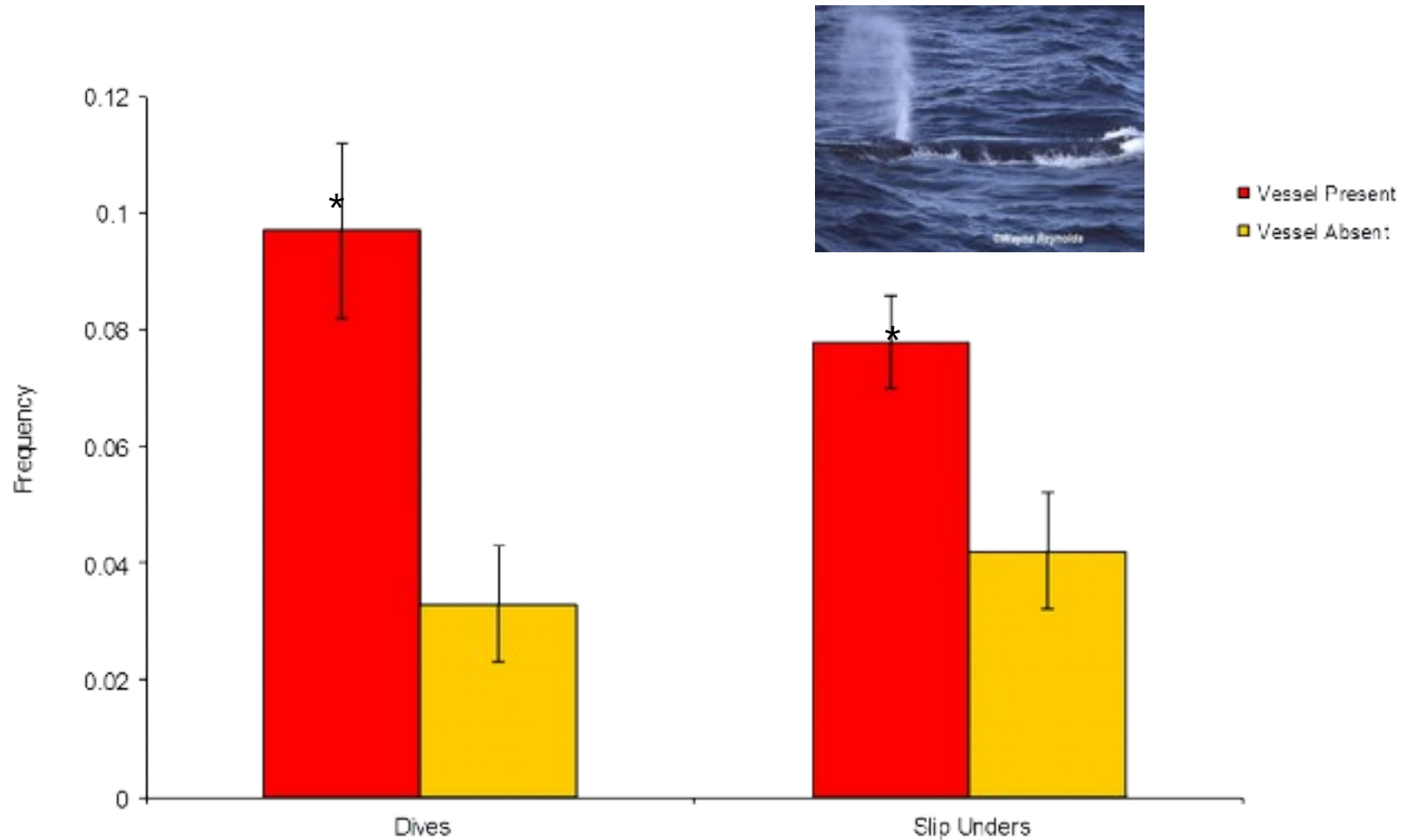
Humpback whales south coast NSW – the whale watcher's paradox



- 63.5% of whale-watchers (n = 1327) said seeing whales up close was an important feature of a good whale watching experience
- 30% thought boat based whale watching poses a direct threat to humpback whales

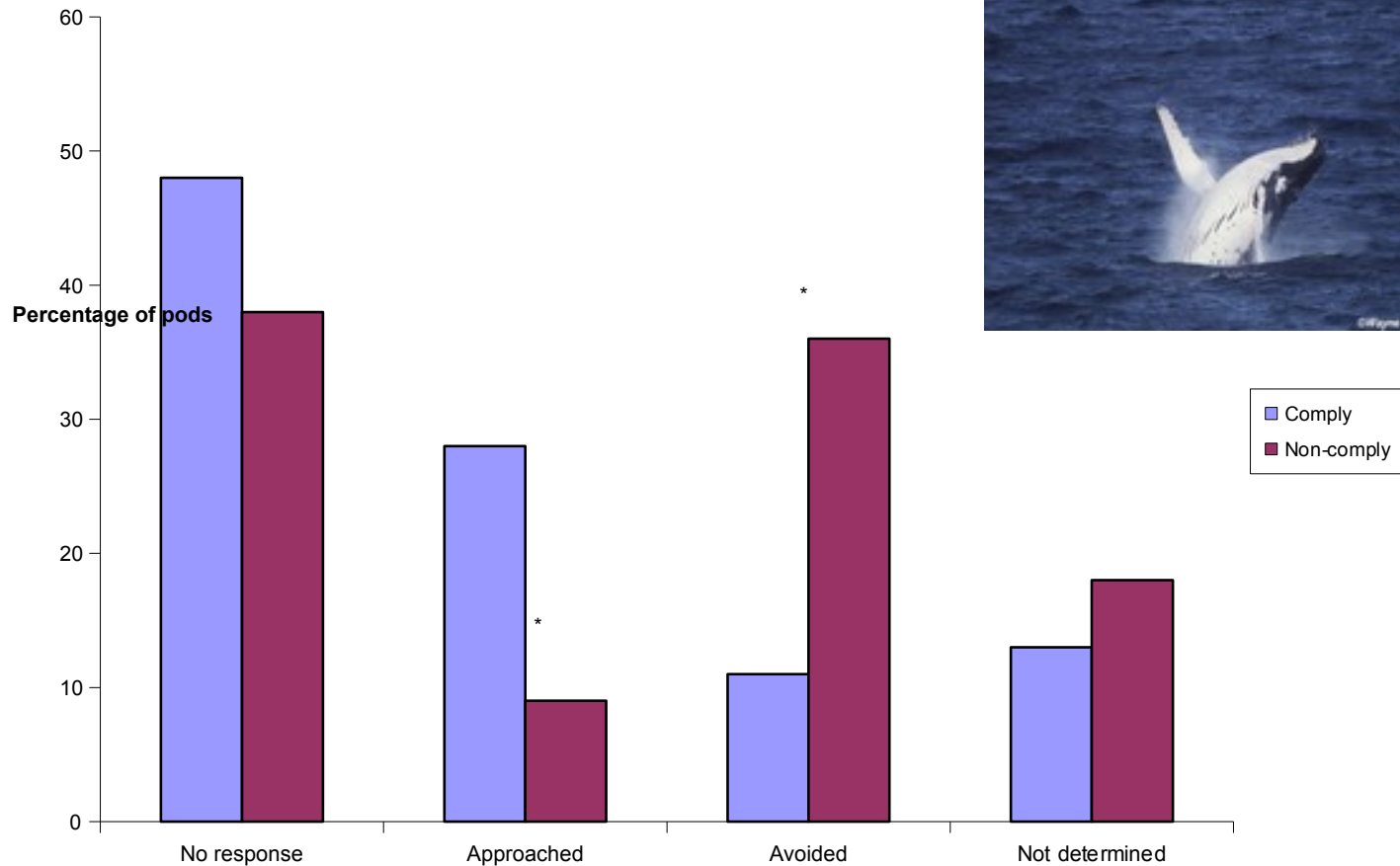
Stamation, K.A., Croft, D.B., Shaughnessy, P.D., Waples, K.A. and Briggs, S.V. (2010). Behavioral responses of Humpback Whales (*Megaptera novaeangliae*) to whale-watching vessels on the southeastern coast of Australia. *Marine Mammal Science* **26**(1), 98-122.

# Whales show some avoidance of boats



Mean ( $\pm$  SE) Dive and Slip Under rates (expressed as number per minute of observation per whale) when vessels were present and absent.. Vessel Present (n = 49) , Vessel Absent (n = 11) . at = 2.04, df = 58, P = 0.046. bt = 2.14, df = 58, P = 0.04. \*P < 0.05

# Whales show lesser reaction when vessels behave consistent to regulations



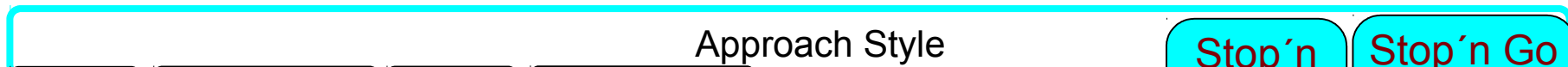
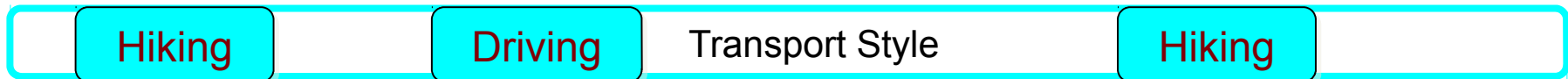
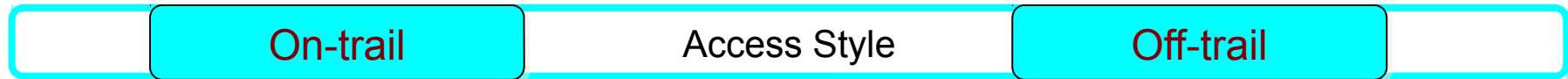
Responses of humpback whale pods to whale-watching vessels that were operating consistently ( $n = 160$ ) and not consistently ( $n = 46$ ) with NSW whale-watching regulations for non-calf pods (*i.e.*, using minimum approach distance of 100 m for all pods) \* Significant residual at  $P = 0.05$ .

# Research: Free-ranging tourists (and kangaroos) – the art of approach



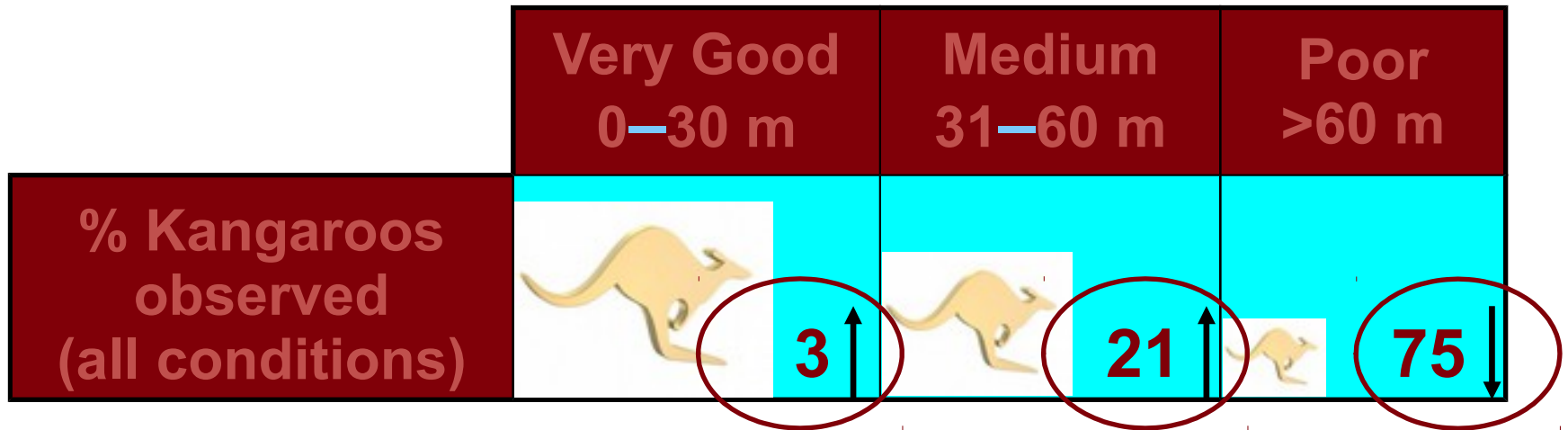
Wolf, I. D. and D. B. Croft (2010). Minimizing disturbance to wildlife by tourists approaching on foot or in a car: A study of kangaroos in the Australian rangelands. *Applied Animal Behaviour Science* **126**, 75-84.

# Approach Treatments





# How to Reduce the Observation Distance



- **Reduction in viewing distance**
  - On-trail, stop´n go (\*by foot)
  - Evening
  - Cover
  - Wind less than 10 km/h

# Research: Red light on wildlife by night

## Objectives:

To design a tour that

- minimizes impacts
- maximizes satisfaction

## Study components:

- Experimental wildlife observation
- Visitor survey



Wolf, I.D., and Croft, D.B. (2012). Observation techniques that minimize impacts on wildlife and maximize visitor satisfaction in night-time tours. *Tourism Management Perspectives*, 4(2012), 164-175.

# Experimental Design



Water Tanks



Creek Beds



White



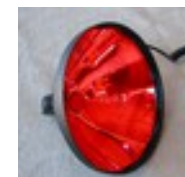
Red



NVD



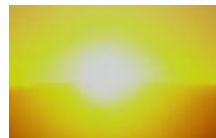
White



Red



NVD



Early



Late

# Recommendations

<b>Total Abundance All</b>	<i>High</i>
<b>Species Richness All</b>	<i>High</i>
<b>Observation Distance</b>	<i>Close</i>
<b>Total Abundance Bats</b>	<i>High</i>
<b>Species Richness Bats</b>	<i>High</i>
<b>Feeding Activity Bats</b>	<i>Some</i>
<b>Behaviour</b>	<i>Social Maint.</i>

**Visitor Opinion**



Watch Mode	Time	Light Mode	Wind
Tank	Early		Calm
Tank	Early		Calm
Tank		NVD	
Tank	Early	NVD	Calm
Tank			
		Light	
Tank		NVD NVD	
75%	62%	61%	Calm

<b>Combi</b>	<b>Early</b>	<b>NVD</b>	<b>Calm</b>
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# Research in wildlife tourism: Our message

- **Understand that while you are watching the wildlife, they are watching you – behave consistently and discretely within their tolerance**

