

Development of Scientifically-based Guidelines for Viewing Seabirds



Trudy Chatwin
Ministry of Environment
Royal Roads University

Seabird nest and roost sites are important to maintenance of BC's biodiversity and many of the important nest colonies are protected in Ecological Reserves and Parks



Mitlenatch Island Provincial Park protects over 300 nesting Pelagic Cormorants. Glaucous-winged Gulls, Pigeon Guillemots and Black Oystercatchers nest here as well



Cleland Island Ecological reserve has 11 species of nesting seabirds

Disturbance to wildlife is a major issue that park and wildlife managers routinely face, yet information to assess threat is often not available

- Disturbance of seabirds birds can cause temporary displacement to a population effect when a colony abandons a site



Ballingall Island

Former DCCO
colony



On the other hand:

- Access to wildlife is critical to generating support for conservation
- Wildlife viewing and ecotourism is important for generating economic activity



Responsible wildlife viewing promotes stewardship of biodiversity and protected areas

- Need to set guidelines based on empirical data
- Reasonable, easily understood, and effective guidelines will ensure that wildlife-viewing is both an enriching and ecologically sustainable activity



Providing buffers between humans and wildlife is one of the most prevalent management techniques to prevent disturbance. My study experimentally sets out to ask these questions:



- What is the distance that seabirds show agitation and flight response?
- Is the distance different for different species of seabird?
- Is there a difference between response to kayaks and motorboats?
- Does the distance differ on islands where seabirds are acclimatized to boat traffic?

Study areas on Vancouver Island

Victoria
Southern
Gulf
Islands
Nanaimo
Pacific Rim
Park
South
Clayoquot
Sound

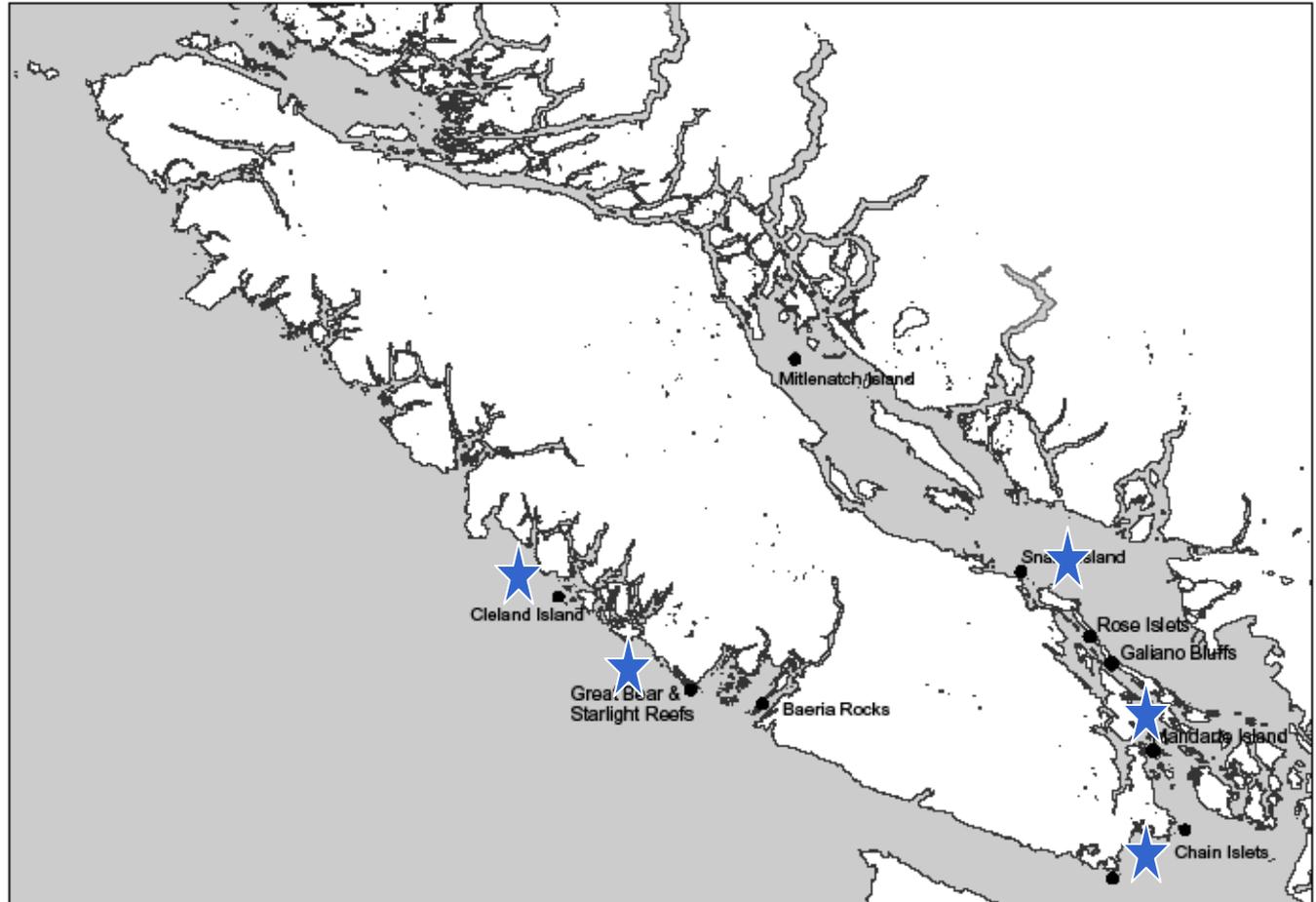


Figure 1. Proposed study areas for determining viewing guidelines for seabird nest-sites on Vancouver Island.

Experimental Sampling with Motorboat and kayak



Boat approach nest or roost site at ca.
5.6 km/hr
Distances measured with laser Yardage Pro
Rangefinder
Distance to agitation measured, Distance to flight
(if flight)

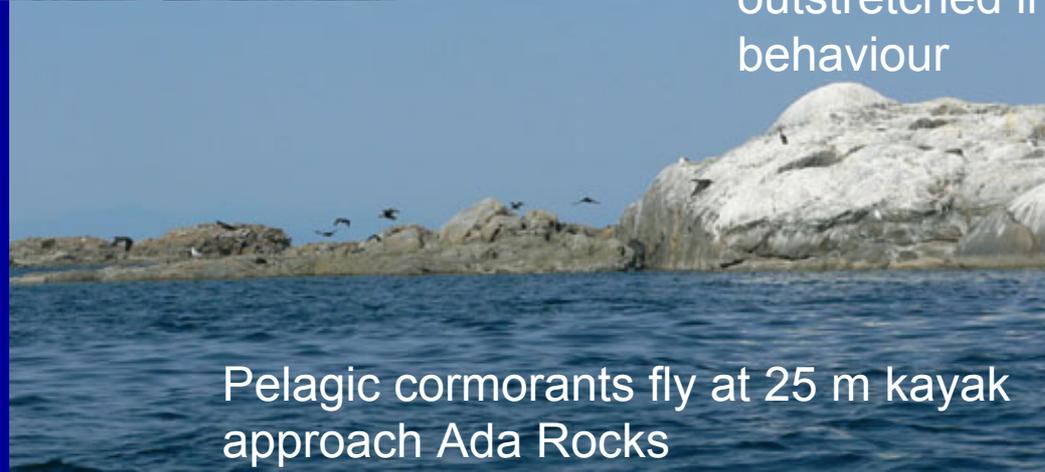
One kayak, approach
tangentially

Results communicated by
marine radio

Normal, Agitation or Alert behaviour and Flight



Pelagic Cormorant neck outstretched in alert behaviour



Pelagic cormorants fly at 25 m kayak approach Ada Rocks

Pelagic cormorants – preening Great Chain Island – Photo taken from kayak at 10m

Different species react differently



Brandt's Cormorants on west coast show alert behaviour at 78 m



Glaucous-winged Gulls show little reaction to kayak or boat in general



Roosting Brown Pelicans and California Gulls take flight at 52m in response to kayak



However, when chicks are present, adult gulls can react to adjacent birds in aggressive manner on boat approach

Observations



Double-Crested Cormorants nest high on cliffs and therefore more protected from boat disturbance



Harlequin Ducks (esp. during moult) swim away at 40 – 80 m



Brandt's Cormorants on west coast tend to fly at even distances over 100 m, but this is not consistent



Seabirds on islets with high boat traffic showed acclimatization and were not disturbed at even close distances.

Observations



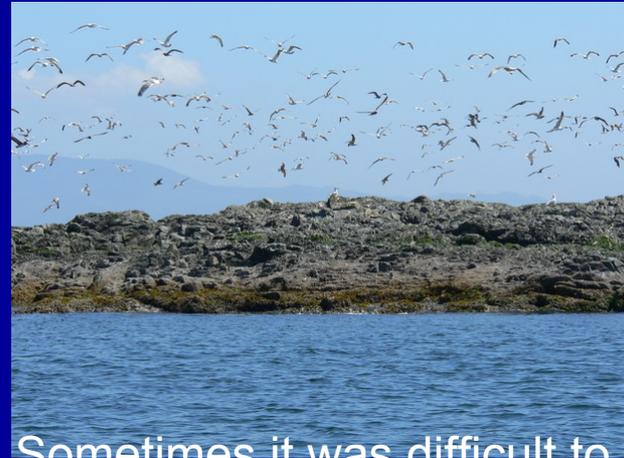
Pigeon Guillemots did not show disturbance until 23 m approach.



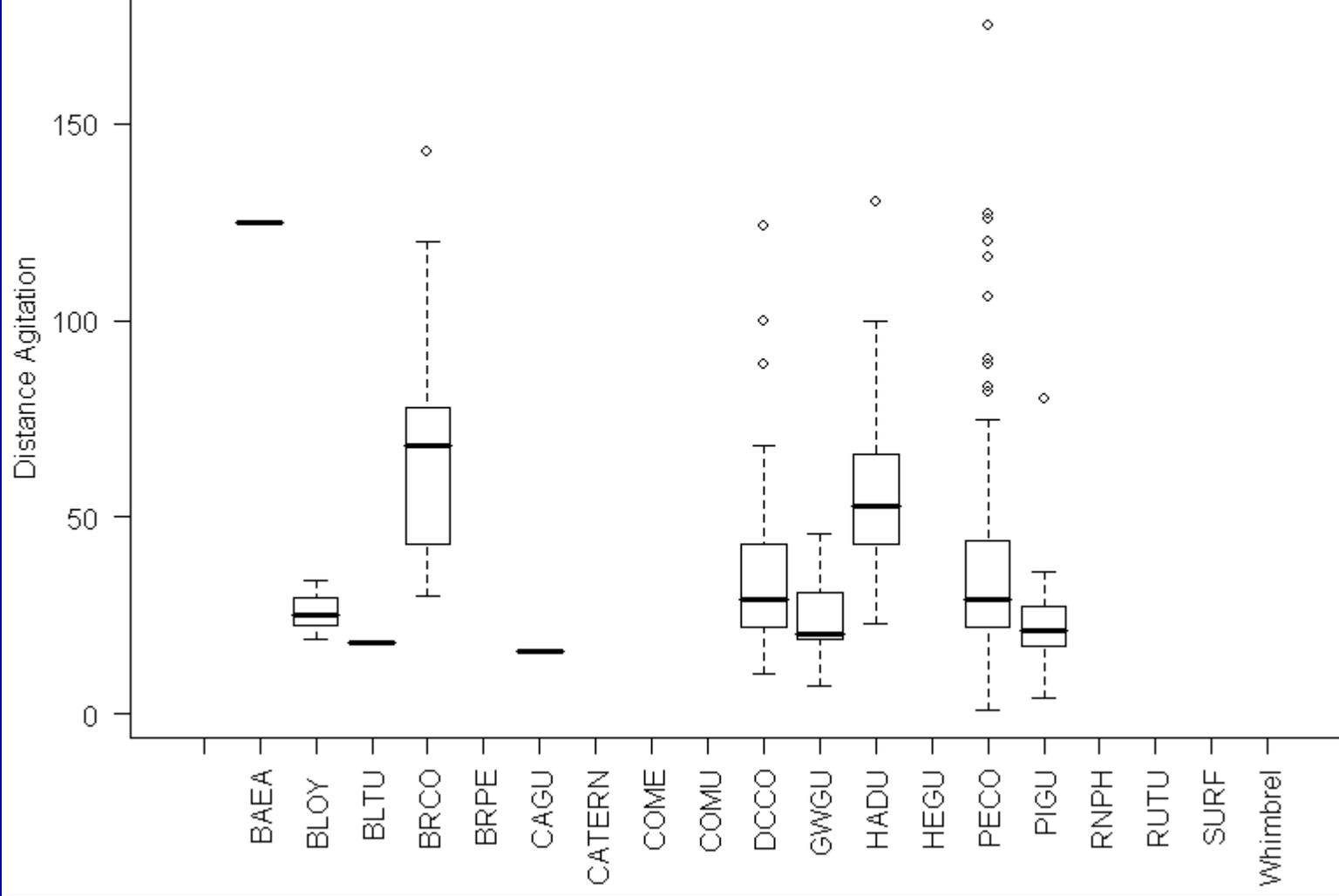
Bald Eagle eating cormorant Gabriola cliffs

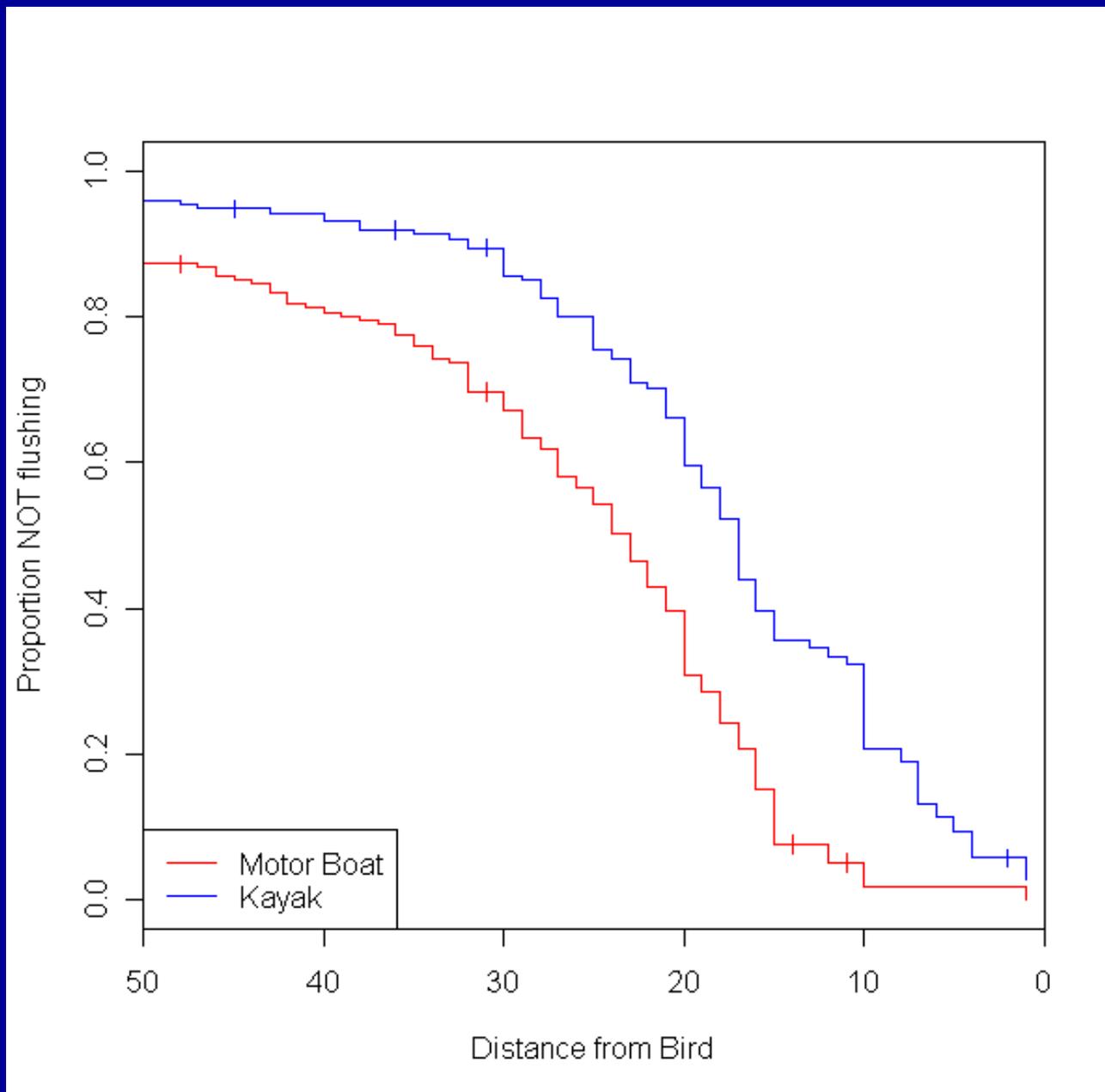


Black Oystercatchers show little reaction at less than 20 m boat approach



Sometimes it was difficult to sample disturbance when Bald Eagle present





Next steps:

- Data analysis – Kaplan-Meier Survival analysis
- Workshop and discussion with colleagues and tour operators to discuss challenges and recommendations
- Thesis write-up
- Recommendations for guidelines



Acknowledgements

- Habitat Conservation Trust Fund for funding
- Parks Canada, BC Parks and Conservation Officer Service for boats and operators
- Volunteers: Liz Hammond – Kaaremaa, Eric Demers, Karen Morrison, Emma Neill and many more
- Dr. Alan Burger, Thesis supervisor
- Ruth Joy: Statistical help

