

Using pop-ups to measure underwater noise levels in 12 important whale habitats along the BC coast



Rob Williams (on behalf of Erin Ashe, Chris Clark & Dimitri Ponirakis)

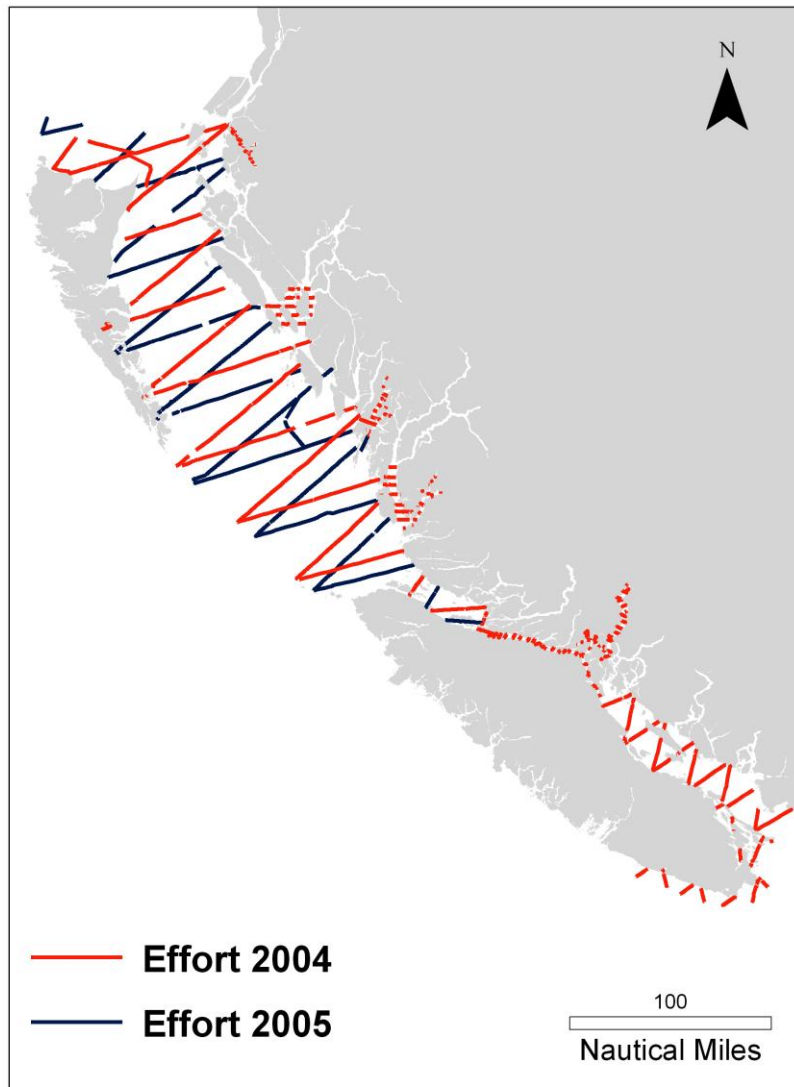


Vessel interaction studies

- Land-based
- Control-exposure experiments to many levels of boat traffic
- Opportunistic tracks & scan-sample behaviour of all whales every 15 min
- Solid body of evidence that boat traffic can bother killer whales (plus basic ecological results)



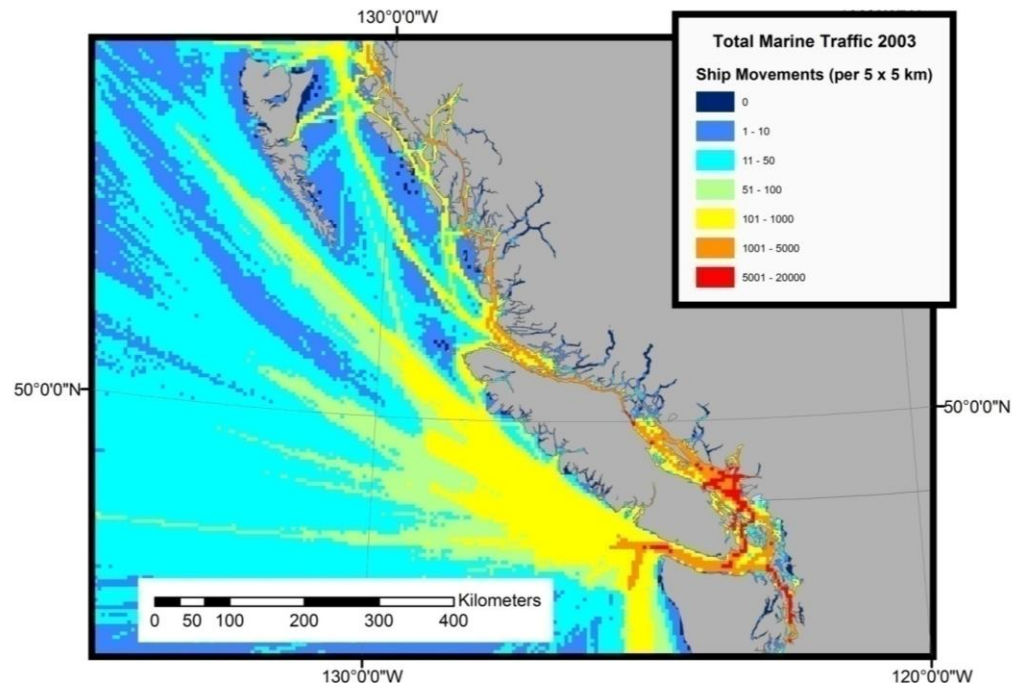
Whale surveys



With Raincoast; Williams & Thomas 2007

Shipping traffic

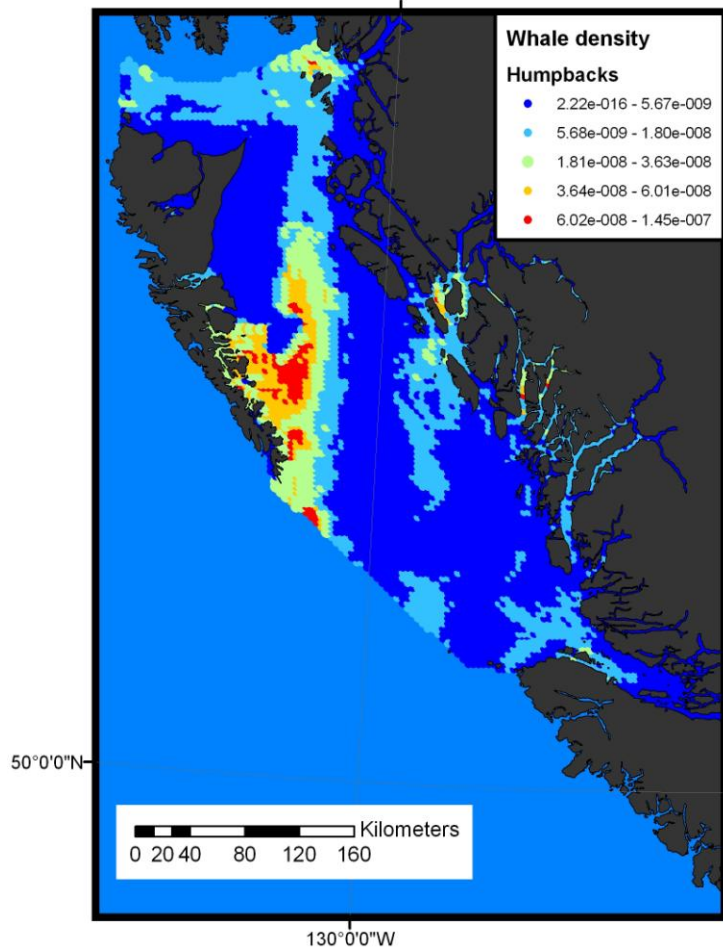
Williams & O'Hara 2010



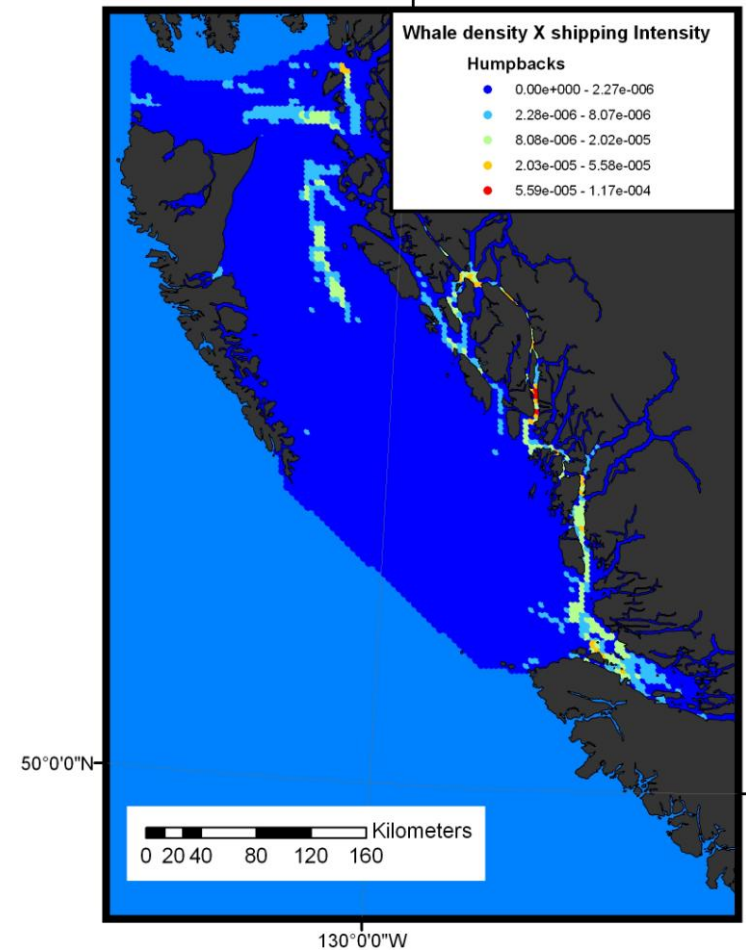
Published survey methods; abundance estimates; density surface maps; bycatch, ship strike and debris entanglement risk assessments; oil spill risk assessment; shark aggregation, etc.

Humpback whales & ships

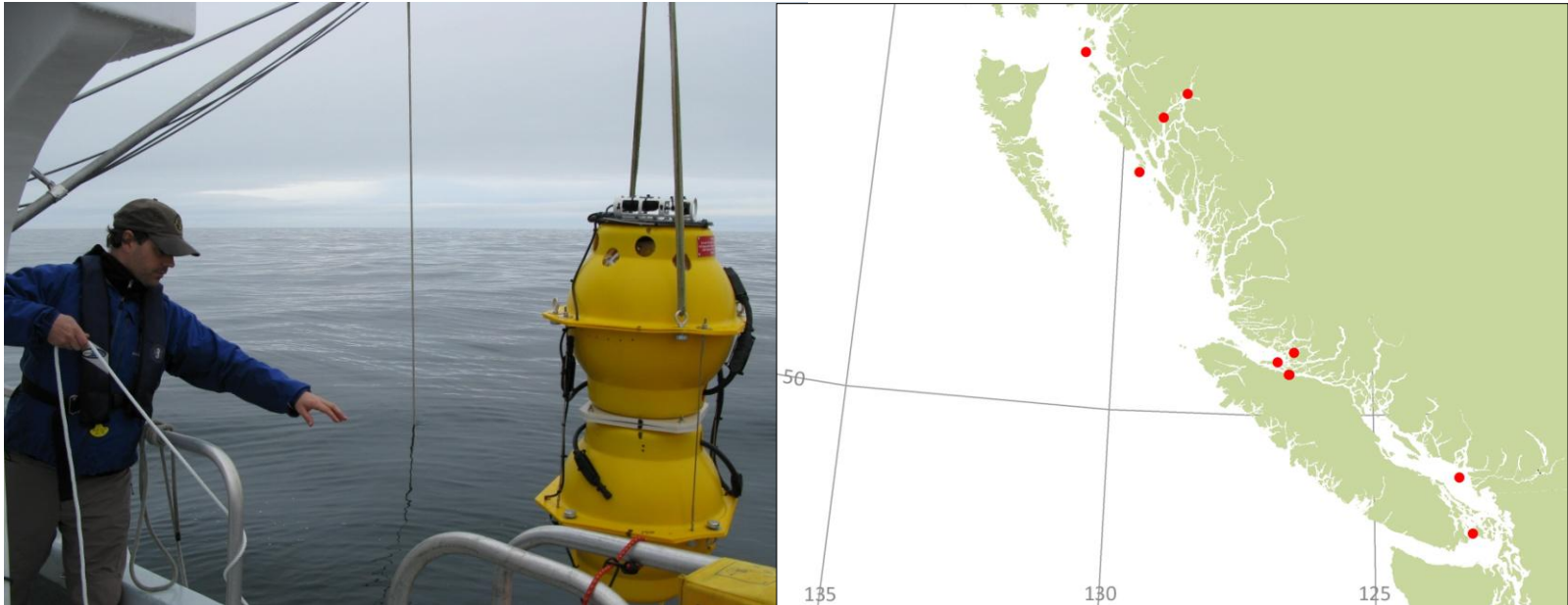
Whale density



Whale + shipping intensity



Project CONCEAL - Chronic Ocean Noise: Cetacean Ecology And Acoustic Habitat Loss



- Three-year (2008-2010) study using Cornell's pop-ups. Noise statistics analyzed, masking metrics calculated, papers in prep.
- Acoustic study in collaboration with Erin Ashe, Chris Clark & Dimitri Ponirakis; Marie Curie fellowship modelling population consequences with Phil Hammond & Len Thomas (St Andrews).

Thank you!



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