



# Establishing a Baseline Monitoring Program for Harmful Algal Blooms (HABs) in the Arctic

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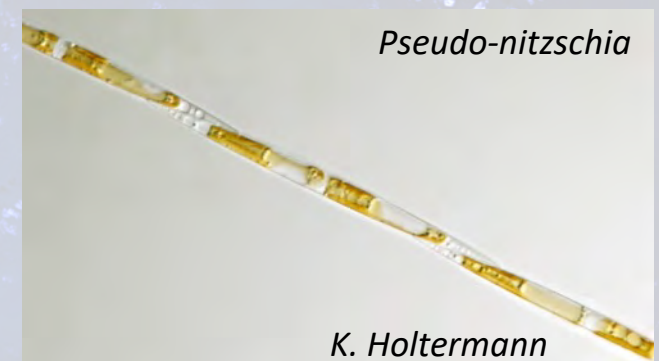






# Harmful Algal Blooms

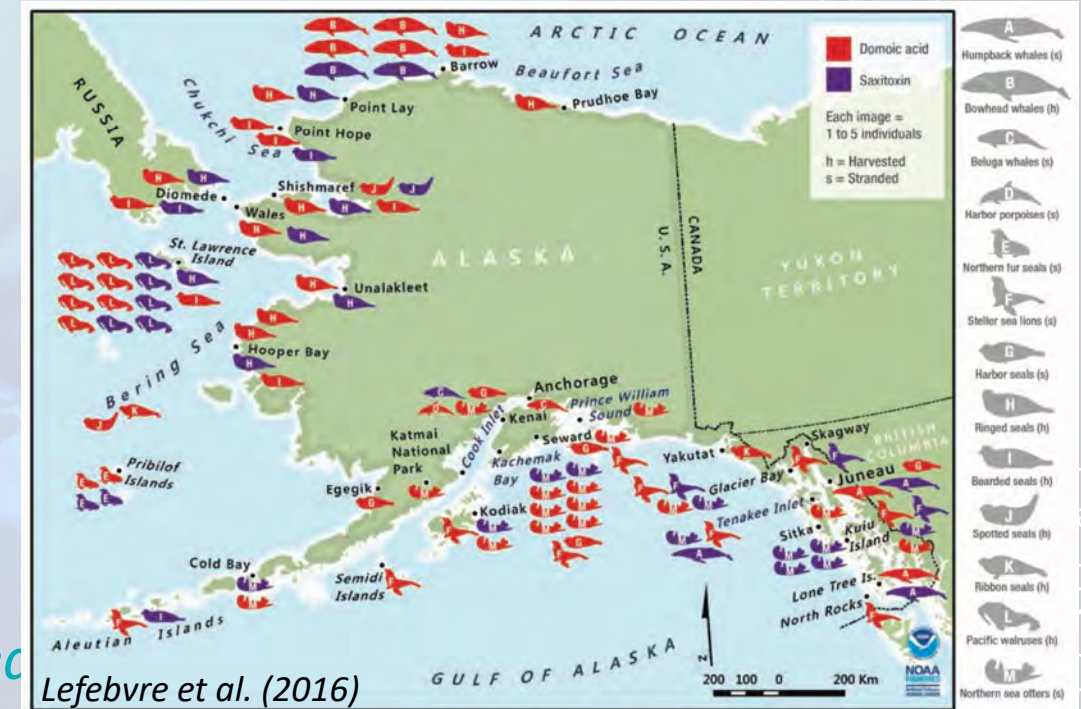
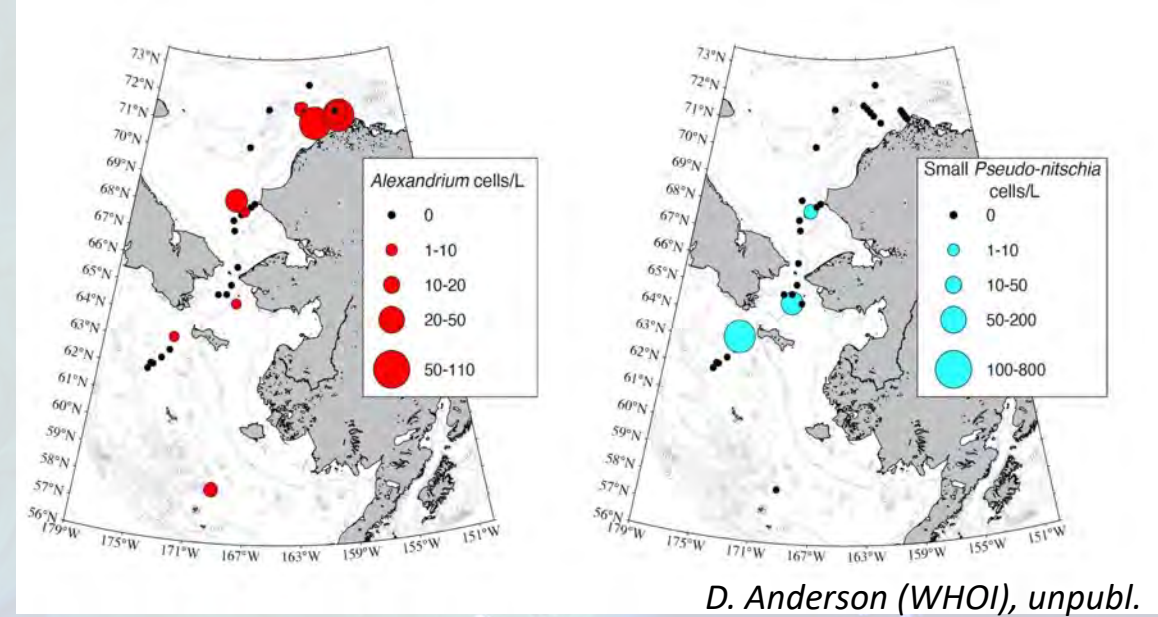
- “HABs” = When algae produce toxins or accumulate to densities sufficient to have harmful effects on the environment or health
- HAB toxins determined to be a top priority for Alaska during a zoonotic disease workshop
- Greatest concern:
  - Alexandrium → Saxitoxin (paralytic shellfish poisoning)
  - Pseudo-nitzschia → Domoic acid (amnesic shellfish poisoning)
- Alaska HAB Network formed to address the risk of HABs to human health and wildlife populations





# HAB monitoring

- Long history of work and coordinated sampling effort in the Gulf of Alaska
- Monitoring HAB species presence and abundance in water samples, and toxin concentration in animal tissues
- In Arctic, projects have started on HAB species offshore and toxin levels in marine mammals and birds
- A few areas have started to look at HAB species near shore (Nome, Diomede)

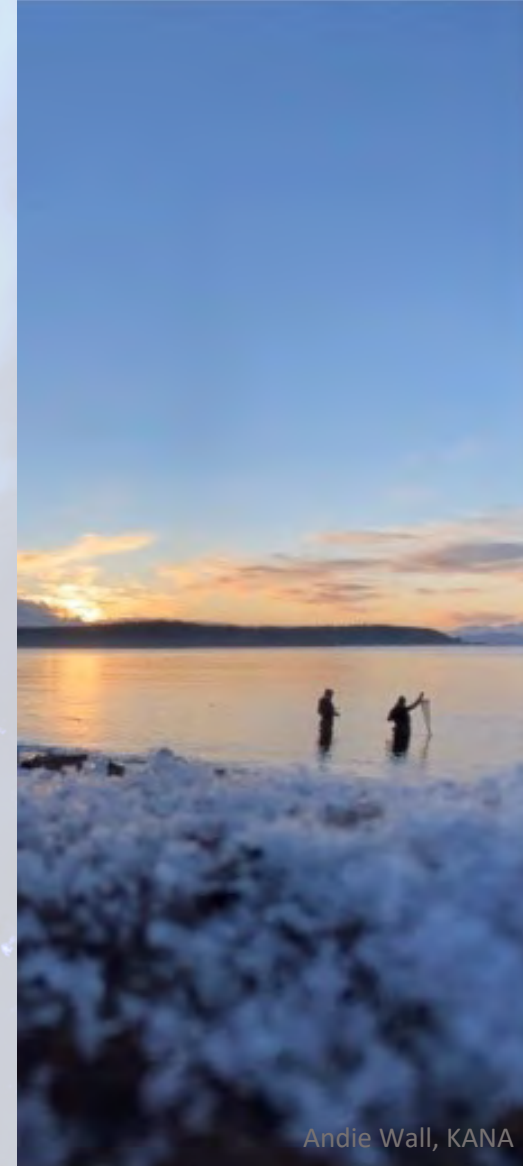






# Expanding HAB monitoring in the Arctic

- Essential to start a baseline time series now to detect future changes
- Utilize the sampling strength of communities
- Goal: provide support/training/funding to communities interested in sampling for HAB species and toxins
- Complement targeted research efforts on food web
- Pilot program in 2022 – aiming for 3 communities to do weekly sampling, funded through individual payments







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