

How is a whale like a tree?

Contact Info

Andrew J. Pershing
Research Assistant Professor
University of Maine School of Marine Sciences
and Gulf of Maine Research Institute
andrew.pershing@maine.edu
207-228-1656

Whales are the largest animals to ever live

- blue whale = 90 tons of biomass (9 tons of carbon)
- only large trees store more carbon

Whale populations store and sequester carbon

- whaling transferred carbon stored in whale tissue to the atmosphere as carbon dioxide
 - rebuilding populations accumulate carbon in living tissues
- whales that die natural deaths can transport their carbon to the deep sea, away from the atmosphere
 - smaller whale populations remove less carbon removed
- 100 years of whaling
 - equivalent to burning 130,000 km² of temperate forest
 - equivalent to 128,000 SUVs driving for 100 years

Bigger is better

- bigger animals require less food (carbon) per day to support each gram of tissue than a smaller animal
- the same amount of food can support a greater tonnage of whales than penguins

Conservation

- same ideas apply to populations of large fish (tuna, sharks, etc.)
- fishing and whaling targets the largest species and largest individuals first
- carbon accounting puts a premium on conserving big things
- carbon credits could provide an additional incentive to rebuild fish and whale populations.

