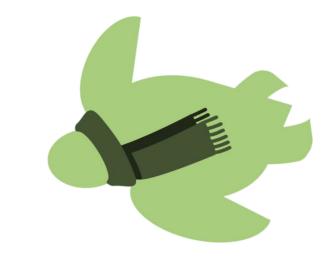
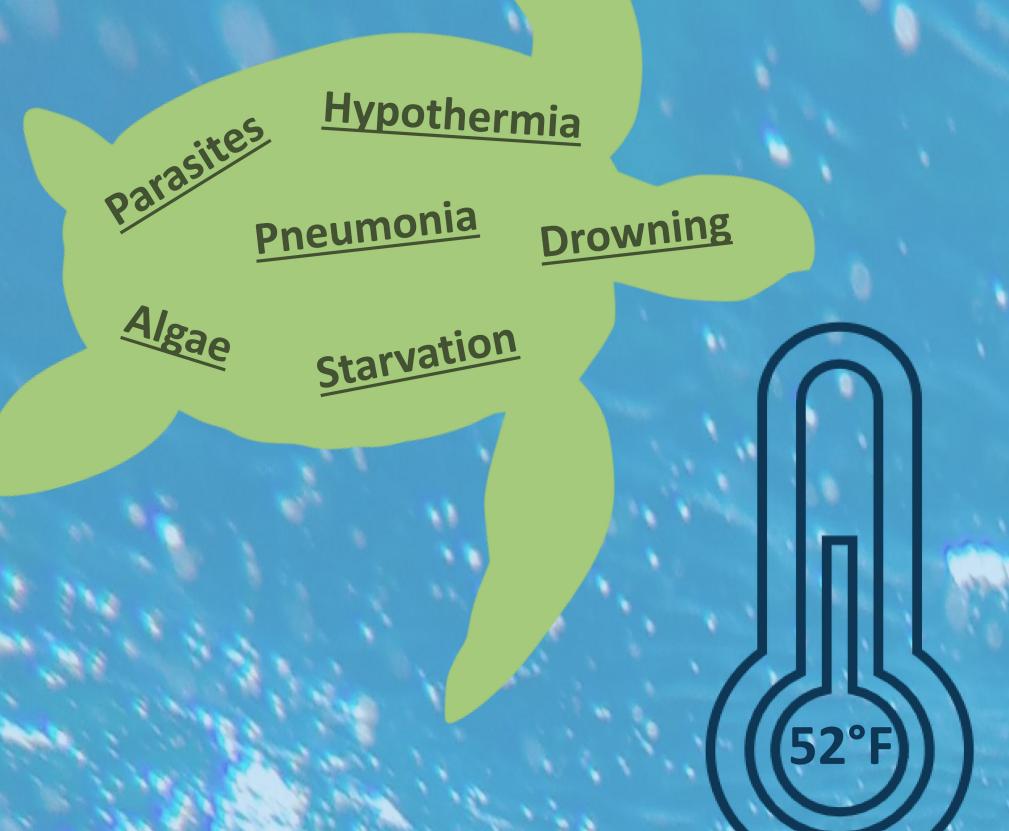


Cold Stunned Kemp's Ridley

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Cold Stunning



When water temperatures dip below 50 degrees Celsius, turtles become cold stunned. As the body temperatures of the turtles decrease, they lose the ability to swim, their metabolism slows, and organs begin to shut down.

This leads various health problems, including hypothermia, pneumonia, starvation, parasites, drowning, and algae growth.

Ryder Beach

Mass Audubon's

Wellfleet Bay

Wildlife

Sanctuary

Goals

- Research why sea turtles were getting cold stunned
- Find them before the process occurs and their physical situation worsens
- Find potential solutions and try to apply them









Mass Audubon
Society sends
volunteers to
beaches in the bay
to search for
stranded turtles
during the
stranding season.
The stranding
season usually
starts in
November, but in
2018 it started in
mid-October.

We attended Mass Audubon's Sea Turtle Open House in Wellfleet. Immediately after high tide, we traveled to Ryder Beach to search for stranded turtles. Our rescue team was lucky enough to find a turtle.

Sea Turtle Open House

November 24, 2018

Sea Turtle Stranding*



Kemp's Ridley: 503



Green: 14



Loggerhead: 8

Total: 525

*As of November 24, 2018

Tools for the Future



Beach Signs

- Improves collection of beached turtles.
- Cheap method of public awareness.
- Signs get washed away by weather.

Satellite Tracking

- Improves collection of turtles prior to being beached.
- Very expensive.
- Many juveniles too small for satellite tags.

Mark Recapture

- Good estimation of population size.
- Can include juveniles.
- Data analyzed after recapture.

Beach Signs



Satellite Tagging



Mark Recapture

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References

"Kemp's Ridley sea turtle nesting" Wikimedia Commons https://commons.wikimedia.org/wiki/File:Kemp%27s Ridley sea turtle nesting.JPG
"USA Mass Cape Cod upper lower" Wikimedia Commons https://commons.wikimedia.org/wiki/File:USA Mass Cape Cod upper lower.svg
"Tracking Kemp's Ridley from Space"

https://medium.com/opvironmental.science.department/tracking.kemps.ridley.turtles.from.space.2681e1sec344

Ruckdeschel, C., Shoop, C. R., & Hoyle, M. (2006). *Sea turtles of the Atlantic and Gulf Coasts of the United States*. Athens: The University of Georgia Press.

Sea Turtles on Cape Cod. (n.d.). Retrieved October 7, 2018, from

Sea Turtles on Cape Cod. (n.d.). Retrieved October 7, 2018, from https://www.massaudubon.org/get-outdoors/wildlife-sanctuaries/wellfleet-bay/about/our-conservation-work/sea-turtles
Hunt, K., Innis, C., & Rolland, R. (2012). CORTICOSTERONE AND THYROXINE IN COLD-STUNNED KEMP'S RIDLEY SEA TURTLES (LEPIDOCHELYS KEMPII). *Journal of Zoo and Wildlife Medicine*, 43(3), 479-493. Retrieved from Marine Animal Rescue. (n.d.). Retrieved October 5, 2018, from https://www.neaq.org/about-us/mission-vision/marine-animal-rescue/

https://www.greateratlantic.fisheries.noaa.gov/protected/stranding/overview/cold.html

Tuesday, October 23, 2018 by New England Aquarium. (2018, October 21). Early Start to Sea Turtle Stranding Season. Retrieved from https://www.neaq.org/blog/early-sta