

## Cold Stunned Sea Turtle Diet Analysis In Cape Cod Bay from 2015-2020

**Authors :** Lucille McWilliams

**Abstract :** As water temperatures drop in November, Kemp's Ridley, Loggerhead, and Green sea turtles cold-stun in Cape Cod Bay. The foraging ecology of these sea turtles remains an understudied area of research. In this study, we aim to assess the diet of these turtles using a multi-tissue stable isotope analysis of cold-stunned kemp's ridley, loggerhead, and green sea turtles stranded from 2015 to 2020. Stable isotope ratios of carbon and nitrogen were measured in blood, front and rear flipper, liver, muscle, skin, and scute tissue samples. We predict an elevated level of Nitrogen isotope ratios in kemp's ridley and loggerhead turtles compared to green turtles due to the carnivorous loggerheads and kemp ridleys' carnivorous diet and the greens herbivorous diet. We anticipate empty stomachs due to starvation while stranded, and a variety of foraging strategies, migration patterns, and trophic positions between these species. Data collected from this study will add to the knowledge of these turtles' prey species and aid managers in the preservation of these species as a mitigation strategy for these turtles' extinction.

**Keywords :** sea turtles, kemp's ridleys, greens, loggerheads, cold-stunning, diet analysis, stable isotope analysis, environmental science, marine biology

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