AGE RELATED RESPIRATION RATES IN LOGGERHEAD (CARETTA CARETTA) SEA TURTLES USED AS A MODEL FOR SPECIES CONSERVATION

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Mortality threats to loggerhead sea turtles can be grouped into surface and below-surface categories. Susceptibility to such threats (e.g. collision with boats, suffocation in shrimp nets, and entrapment in power plant uptake pipes) varies with loggerheads' activity in the water column. Loggerhead respiration is the only behavior that is consistent enough to provide a means of modeling their activity in the water column; sea turtles must breathe air at the surface of the water and pattern their swimming behavior to meet this requirement. This study monitored the respiration rates of four age-categories of captive loggerhead sea turtles. Time spent at the surface varied inversely with age; younger turtles spent more time at the surface, while older turtles spent more time below the surface. Breathhold time (how long an individual could remain under the water surface without needing to come up for air) varied directly with age. Older turtles had lower respiration rates than younger turtles, and therefore spent more time under water. These patterns are used to model specific mortality threats to loggerheads according to age.