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ONTOGENETIC CHANCES IN SEA TURTLE BODY SHAPE; MORPHOLOGICAL ANALYSES AND ADAPTIVE IMPLICATIONS. Wyneken, J. Florida Atlantic Univ., Boca Raton, USA.

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Sea turtles are small (15-40 g) at hatching. Hatchlings represent a dispersal stage in all species. They are largely defenseless against many predators. Hatchlings enter the ocean, migrate offshore and spend several years in the pelagic environment. There they grow rapidly and undergo a series of morphological changes in body shape. Captive and wild caught turtles were measured directly and photographed. Shape changes were analyzed quantitatively and qualitatively. Loggerhead sea turtles develop pronounced, sharp spines along the vertebral and posterior marginal scutes. These persist until the turtles reach a body size typical of animals returning to coastal waters. By the time their spines regress, the animals have out-grown many potential predators. Green sea turtles lack spines during all life stages. In the pelagic stage of green turtles, the carapace grows from an elliptical shape (when viewed from the dorsal or ventral aspects) to a nearly circular shape. Green turtles returning to coastal waters have regained their elliptical appearance. I speculate that these changes in body shape represent strategies for predator avoidance. Additionally specific body designs coupled with species specific swimming behavior may affect pelagic dispersal.