Atlantic Sturgeon Telemetry on the Continental Shelf Using an Acoustic Array and Acoustic Wave Glider Off North Carolina's Outer Banks

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Cape Hatteras is a major topographic feature that changes the dynamics of near-shore large ocean currents including the Labrador Current and Gulf Stream. The Cape constricts shelf habitat and restricts the migratory corridors of highly migratory species. The Hatteras Acoustic Array just south of the Cape indicates that this area is heavily used by species of concern year-around. Atlantic sturgeon migrate southward through Hatteras Bight in the fall and northward in the spring; some remain in the area throughout the winter months. Sandbar Sharks, Sand Tiger Sharks, and some Atlantic Sturgeon seem to migrate to Hatteras Bight and remain in the area throughout the winter, while other Atlantic sturgeon and White Sharks tend to migrate through Hatteras Bight on the way to other overwintering grounds. The period November through April seems to be the most critical period for these four species. Use of an Acoustic Wave Glider in combination with an ocean-based acoustic array can provide expanded (year-round) coverage of Atlantic Sturgeon ocean habitat and migratory pathways.