# Migration Flyway Assessment of Regional Offshore Wind Impacts

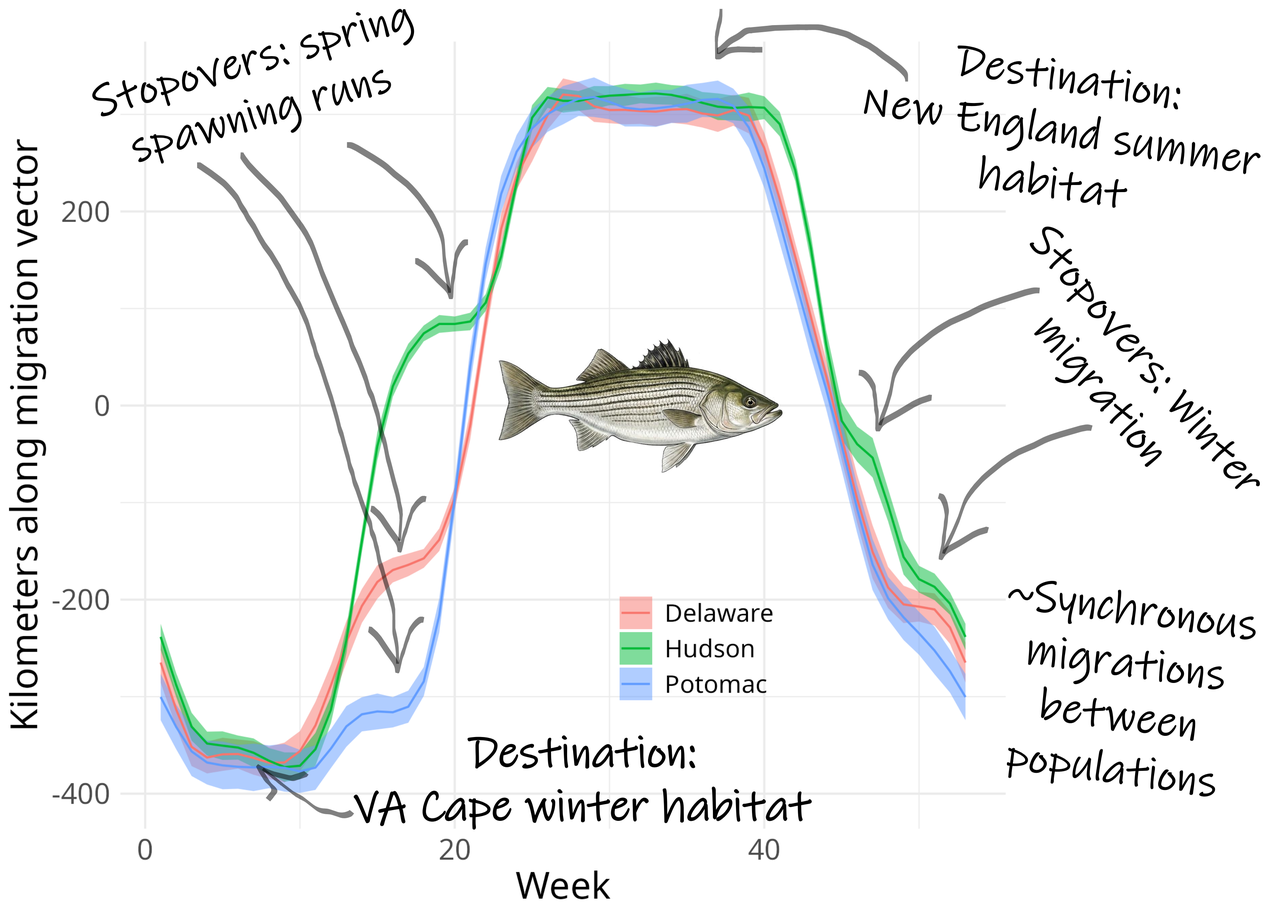


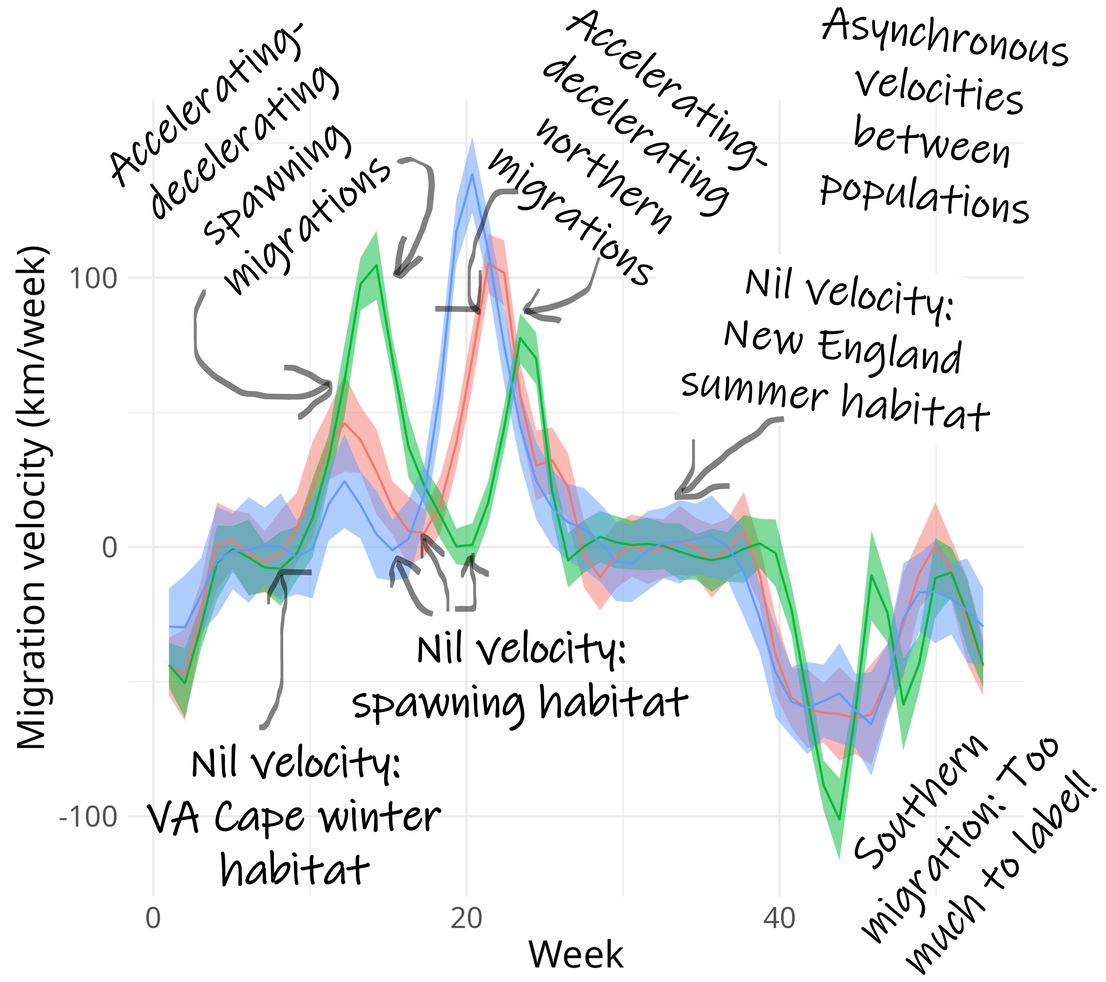
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**Beta-testing the flyway assessment on striped bass**

1. Striped bass flyway model fitted to 10-yr telemetry dataset.
2. Prior to fit, geospatial data rotated to “Migration North.”
3. Migration velocity was derived from the flyway model.

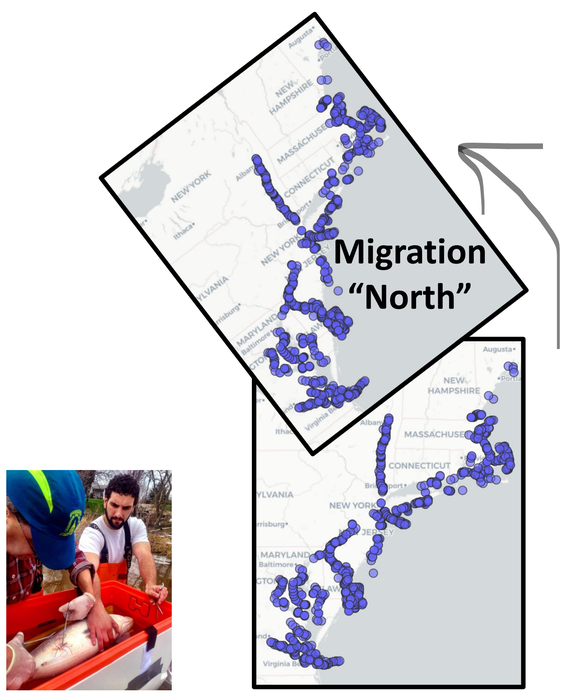
Ongoing work on Atl. Sturgeon, sand tiger shark 10-yr datasets.



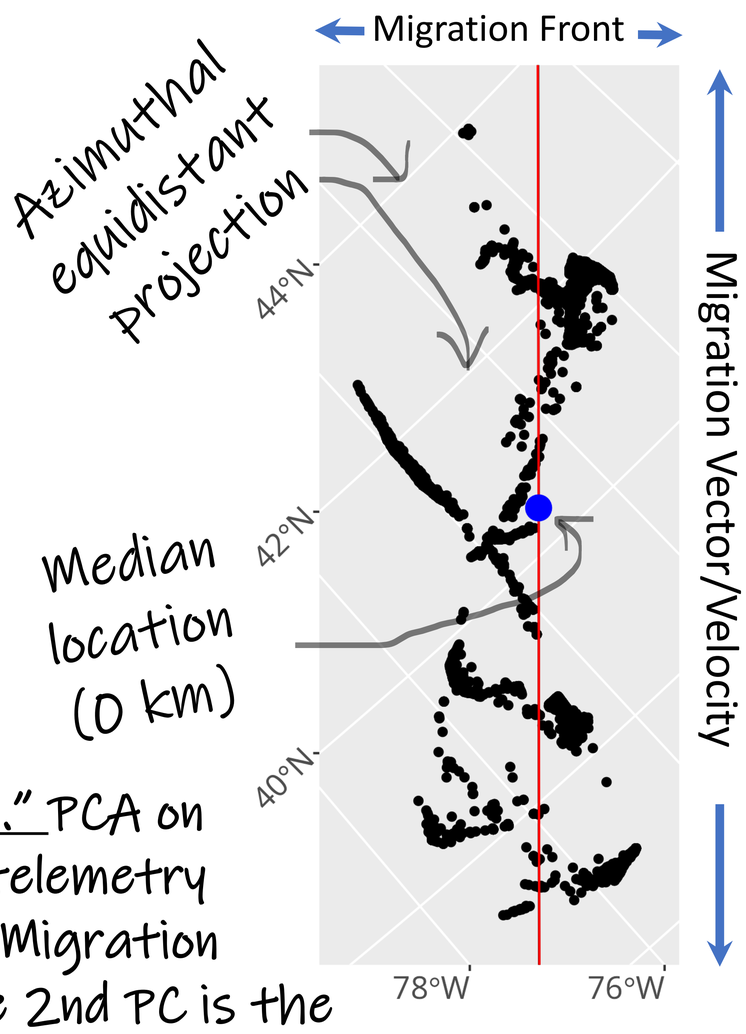




1 Modeling the Migration Vector. 10-yr (N=255) striped bass telemetry dataset is rotated to follow axis of most variation (see below). Seasonality in the migration vector modeled with a by-variable GAM, random effect of year, for three populations.

3 Modeling Migration Velocity. The 1st derivative of the Migration Vector is migration velocity. Nil velocities indicate destination and stopover habitats. Velocities accelerate and then decelerate as destination and stopover habitats are approached.




Analyst: Mike O’Brien




2 Finding Migration “North.” PCA on projected coordinates of telemetry detections identifies the Migration Vector as the 1st PC. The 2nd PC is the “Migration Front” (~cross-shelf migrations). Median location (0,0 on the PCA) partitions N (+) and S (-) regions.

**Background:** Flyway assessments track **how fast** and **where** marine animals move between habitats during different seasons. Baseline flyway assessments will allow the regional impact of offshore wind projects to be tested against other impacts such as climate change. Rich regional telemetry, satellite tagging, and passive acoustic databases support these assessments.




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