



Supplementary Figure 3. Abacus plots depicting examples of 4 characteristic movement patterns of Atlantic sturgeon (*Acipenser oxyrinchus*) in the study area, eastern Long Island Sound and the Connecticut River, from April through November in a given year of the study period of 2019–2021. Grey bars represent receiver deployment times. To detect tagged fish, an array of acoustic receivers was used in each of 3 locations: Long Island Sound at river kilometer (rkm) 5 and below (dark blue line), the lower section or estuary of the Connecticut River between rkm 5 and 19 (light blue line), and the upper section of the river above rkm 19. **(A)** Example of a fish that exclusively utilized Long Island Sound or the lower river throughout the tracking season in 2020 (tag 20428, estimated total length [TL]=104.8 cm). **(B)** Example of a fish that stayed mostly in the estuary in 2019 (tag 29844, estimated TL=72.4 cm). **(C)** Example of fish that made direct and deliberate movements upriver maximally to rkm 47 (near Portland) but remained there for just a short period of time in 2021 (tag 55193, estimated TL=132.2 cm). **(D)** Example of a long-term visitor to rkm 47, a fish that often made less direct movements northward, moving between multiple stations, before staying at rkm 47 for extended periods of time in 2020 (tag 5823, estimated TL=123.6 cm).