

{rokbox title=|Temporal progression and routes of most likely migrations of four tope (Galeorhinus galeus) :: Image: Authors| thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-extensive-oceanic-mesopelagic-habitat-use-migratory-continental-shark-species-schaber-et-al-2022-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-extensive-oceanic-mesopelagic-habitat-use-migratory-continental-shark-species-schaber-et-al-2022.jpg{/rokbox}

Matthias Schaber, Sven Gastauer, Boris Cisewski, Nicole Hielscher, Michael Janke, **Marian Peña**

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Abstract: The identification of movement and behaviour patterns, as well as inter- and intra-population connectivity is crucial in order to implement effective and functional management and conservation measures for threatened migratory species such as tope (*Galeorhinus galeus*

). Yet, previous studies struggled to elucidate clear and consistent movement and depth usage patterns of adult tope in the Northeast Atlantic, suggesting a high plasticity in the migration and behaviour. We deployed pop-up satellite archival tags on adult tope during their seasonal summer aggregations in the inner German Bight of the south-eastern North Sea and near a presumed mating site in southwest Scotland. Depth distribution and migration pathways were derived from time series data with location processing. Four individuals followed migration trajectories leaving coastal areas and crossed the European shelf slope into oceanic areas of the Northeast Atlantic, remaining fully pelagic for the rest of the deployment duration. These sharks showed far-ranging migration trajectories and undertook regular and frequent diel vertical migrations, reaching daytime depths of over 700 m. Vertical migration patterns closely overlapped with biological mesopelagic habitat structures and closely tracked the diel migration of organisms from deep scattering layers derived from hydroacoustic recordings. It is hypothesized that adult tope regularly utilize oceanic habitats, foraging on mesopelagic layers in an environment generally considered of low prey density.

Keywords: