

Longterm Use of a Shark Breeding Ground: Three Decades of Mating Site Fidelity in the Nurse Shark

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The Dry Tortugas, Florida has been known as a courtship and mating ground for nurse sharks, *Ginglymostoma cirratum*, for over a century. In a study spanning over thirty years, we have documented long-term site fidelity to this area with data from 137 adult sharks (89 female, 48 male) tagged with PIT, fin, and acoustic tags. Of 118 sharks tagged from 1993 to 2014, at least 80 (68%) returned to the site in subsequent years during the June-July mating season. Known individuals returned in up to 16 different mating seasons and over periods of up to 28 years, revealing that lifespan extends at least into the forties for this species. Of all returning sharks, 59% (N = 47) have been monitored for over 10 years and 13% (N = 10) have been monitored for over 20 years. The small (5-hectare) mating ground has been seasonally protected from human activity since 1996, but storms in 2022 and 2023 substantially altered the site, and this appears to be impacting the way that sharks utilize the area. In our ongoing work, we are monitoring the behavioral ecology of this population using mark-recapture, acoustic telemetry, and advanced datalogging tags including accelerometers and animal-borne cameras. The long-term mating site fidelity of this shark population reveals the importance of identifying and protecting mating sites for this and other elasmobranch species.