Whale Shark Aggregations in the Northern Gulf of Mexico

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Background: The *Northern Gulf of Mexico Whale Shark Research Program* was initiated in 2003 to increase our knowledge of whale shark occurrence and distribution within the region. A primary goal was to obtain sightings data from "citizen scientists" to guide directed research. Whale sharks are typically solitary animals, but are known to aggregate in areas of high prey abundance. M**ethods:** Whale shark sightings data reported from 2003 to present were compiled. Aggregations were defined as more than one whale shark, and large aggregations were defined as 10 or more sharks, observed at a specific location at the same time. Efforts were made to encounter aggregations to determine size and sex assemblage of the sharks, and to collect plankton samples to identify potential prey. **Results:** To date we have over 600 whale shark sightings reports and four research encounters of large aggregations. Whale shark aggregations represented 31% of reported sightings, 25% of which were large aggregations between 10-150 individuals. All of the reported large aggregations occurred during summer, almost exclusively along the continental shelf edge, with 41% occurring at Ewing Bank. Three out of the four scientific encounters occurred at Ewing Bank (2009, 2010, 2013). Aggregations were dominated by immature males that were primarily feeding on *Euthynnus alletteratus* eggs. **Conclusions:** The use of sightings data provided by "citizen scientists" has proven to be an inexpensive and effective technique for identifying whale shark aggregation locations in the northern Gulf of Mexico. Aggregation assemblages appear to consist of largely juvenile males that were feeding on tuna eggs. Similar to other regions, it is unknown if whale sharks in the northern Gulf of Mexico primarily consist of juveniles or if juveniles simply dominate these large feeding aggregations.

Key Words: Feeding aggregations, Ewing Bank, *Euthynnus alletteratus*, citizen scientists