

Acoustic Telemetry with Sea Turtles in Virginia

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The Virginia Aquarium Foundation (VAQF) and the U.S. Navy have been working together since 2013 to determine the efficacy of using acoustic telemetry for investigating the fine scale movements of sea turtles in the vicinity of Navy facilities in southeastern Virginia. To date, we have deployed 56 acoustic tags (VEMCO V16, V13 and V9 69 kilohertz tags), 14 from Jul-Nov of 2013, 24 in 2014 and 18 May-Jul of 2015. The U.S. Navy maintains an array of 71 acoustic receivers (VEMCO VR2W) in southeastern Virginia and downloads and processes data every other month. There is a four to six month delay from the time of detection to VAQF receiving processed tag detection data. For this reason, we will discuss results for turtles tagged in 2013 and 2014. Of the 38 turtles tagged in 2013-14, five were wild caught (incidentally or directly captured) and 33 were stranded, rehabilitated and released. Of the stranded turtles, 14 were caught on recreational hook and line, 13 were cold-stunned and the rest were boat strikes (n=3), diseased (n=2) or entangled in other gear (n=1). In total we deployed tags on 18 loggerheads, 15 Kemp's ridleys (one was released twice) and 4 green turtles. Of these 15 (83%) of the loggerheads were detected, 11 (73%) of the Kemp's ridleys were detected and 3 (75%) of the greens were detected. Seven of the turtles stranded dead since release (3 wild and 4 stranded) and of these one was never detected. Seven turtles were released after mid-Oct south of the Navy receiver array and, of these, four were never detected. For loggerheads, Kemp's and greens that were detected, mean number of detections were 220, 57, and 187, number of different days detected were 6, 3, and 10, and days post-release were 97, 21, and 53 respectively.

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