A Spatial Analysis of Sea Turtle Nesting Patterns in Palm Beach County, Florida

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Abstract

We explore variations in the observed spatial pattern of sea turtle nesting behavior at Juno Beach, Palm Beach County, Florida for the 1998-2000 nesting seasons. Of particular interest is an assessment of possible effects due to a 990-foot fishing pier constructed in 1998-1999. The data include approximately 8,000-10,000 emergence locations per nesting season over 6 miles of beach with locations identified by global positioning system (GPS) units with sub-meter accuracy. Typical statistical analyses (Chi-square and Kruskal-Wallis tests) suggest some significant changes between years in counts of emergences for certain marked zones but do not readily identify where significant local differences occur along the beach.