NESTING BEHAVIOR OF SEA TURTLES IN KIWAYU AND MVUNDENI BEACHES, LAMU COUNTY

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Abstract

Sea turtles are globally threatened including Kenya where they are legally protected. A lot of efforts have been put to conserve these species, including involvement of local communities. Understanding the nesting behavior of sea turtle in seashores has been considered as one of the conservation strategies. I investigated spatio-temporal patterns of sea turtle nesting activity monitored over 3 successive years between Kiwayu and Mvundeni beach locations in the Lamu seascape, Kenya. I also investigated the physical characteristics relevant to sea turtle nest site selection. Community-based patrols were conducted on 10 stretches of beach grouped in two major locations (Mvundeni: 6 beaches while Kiwayu: 4 beaches). A total 191 of nests were recorded: 184 green turtle nests and 7 hawksbill nests. Nesting occurred year-round, with higher trends recorded between February and July, and lower between August and March. On average 55 nests were recorded annually ranging from 20 nests in 2017 to 67 nests in 2015. The mean density during the peak nesting months was 4.3 ±SE 0.8 km⁻¹. Spatially, the average nest density over the study period was higher for Mvundeni (12 ±SE 5 nests/km) compared to Kiwayu (5 ± 1 nests/km). However, the student’s t-test confirmed that the mean nest density between the two locations is the same (\( t=0.85, p=0.21 \)). The annual nesting presented statistical differences \( (f=3.96, p<0.05) \) while monthly nesting trends did not present any statistical differences \( (f=1.68, p>0.05) \). There were some levels of annual variations in nesting activity between the study locations. Green turtles were reported to nest both in Kiwayu and Mvundeni, with the highest number (71%) of nests recorded on Kiwayu compared to Mvundeni (29%). Hawksbill turtle nests were reported in Kiwayu but not in Mvundeni. Beaches that were wider (> 7.5m) on average had more nests compared to narrow beaches (< 7.5m). The study highlight the spatio-temporal patterns of sea turtle nesting activity in Lamu seascape, Kenya, thereby enhancing the understanding of their nesting behavior thus promoting their conservation.